



## Mi Power Distribution Boards up to 630 A

- combinable enclosure system
- degree of protection IP 65
- made from polycarbonate
- protection class II, 🗖
- in accordance with IEC 61 439 Part 2

Assembling videos



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44 44

#### Mi Distribution boards Contents

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System description	266 - 267
Power distribution boards up to 630 A as power switchgear and controlgear assembly (PSC) in accordance with IEC 61 439 Part 2	267
System design / System benefits / Assembly examples	268 - 271
Product benefits: Empty enclosures and Circuit breaker boxes	272
Empty enclosures with transparent lids	282 - 283
Empty enclosures with opaque lids	284 - 285
Circuit breaker boxes for installation of DIN rail equipment up to 63 A	
with PE and N terminals, 9 up to 84 modules with hinged flaps , with PE and N terminals, 12 up to 48 modules without PE and N terminals, 12 up to 36 modules <b>with hinged flaps</b> , without PE and N terminals, 12 up to 48 modules for miniature circuit breakers (MCB)	277 - 278 279 280 - 281 282 283
<b>Circuit breaker boxes</b> for installation of DIN rail equipment <b>up to 63 A</b> with removable DIN rail rack for earth connection (British Standard)	070 001
WITH PE and N terminals, 56 up to 84 modules	278, 281
Meter Boxes	284 - 285



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HRC fuse box with fuse elements, HRC fuse boxes with fuse switch disconnectors on busbar system	
HRC fuse elements and busbars	286 - 293
HRC-fuse switch disconnectors and busbars	294 - 301
Busbars	302 - 305
Busbar boxes prepared for Miniature Circuit-Breakers (MCB)	306 - 307

<u>Env</u>case,

**EOV**BOALD

**STAP** 

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#### Mi Distribution boards Contents

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<b>Mi Isolator Boxes</b> with built-in switch disconnectors Accessories	308 - 312 312
Changeover switch boxes(I-0-II)	314
Mi MCCB Circuit-Breaker Boxes with Circuit-Breaker	315 - 316
Empty enclosures with transparent hinged lids 3 walls with metric knockouts for cable entry and assembly	317 - 318
Empty enclosures with opaque hinged lids 3 walls with metric knockouts for cable entry and assembly	319 - 320
Accessories	322 - 350
Technical Details Assembly	352 - 366 362 - 366

<u><u><u></u>env</u>case</u>

**ENV**BOALD

**UDTSYO** 



**ENVCASE** 

ENVBOALD

**CUVSTA** 

ENYMOD

	Environmental conditions	<ul> <li>Ambient temperatures</li> <li>for distribution boards in accordance with IEC 61 439: -5° C up to 35° C, max. + 40° C humidity: 50% at 40° C, 100% at 25° C</li> <li>for empty enclosures: - 25°C up to + 70° C The rated insulation voltage is possibly reduced by the installed equipment technology</li> </ul>
	Application area	The enclosures are suitable for the protected outdoor installation - harsh environment and / or protected outdoor. However the climatic influences and effects on the equipment are to be considered, see Technical Details: Operating and Ambient Conditions
N	Insulation	Instulated enclosures (Protection class II) 🔲
	Impact strength	Degree of protection against mechanical load IK 08 (5 Joule) in accordance with IEC 62 262
	Protection against froeign solid objects and direct contact	Dust-proof Degree of protection IP <b>6</b> 5
	Protection against ingress of water with harmful effects	Protected against water Degree of protection IP 6 <b>5</b> Note: Single enclosures without any flanges and components mounted in the lid have degree of protection IP 66
N	Electrical parameters	Rated current: 630 A Rated insulation voltage: AC 690 V, DC 1000 V*, IEC 60 664 * The rated insulation voltage is possibly reduced by the installed equipment technology

### Material: Polycarbonate

960°.C	Burning behaviour	Glow wire test 960°C in accordance with IEC 60 695-2-1, flame-retardant, self-extinguishing UL Subject 94, V-2
	UV resistance	UV resistance according to IEC 61 439-1 The material is examined for UV resistance
	Chemical resistance	Resistance against acid 10% and lye 10%, petrol and mineral oil
	Toxic behaviour	Silicone- and halogen-free



#### Mi Distribution Boards System Description



Power distribution boards up to 630 A as power switchgear and controlgear assembly (PSC) in accordance with IEC 61 439 Part 2



Mi Distribution boards are particulary suitable for the application in challenging industrial and demanding ambient conditions and difficult environments.



Mi Distribution boards are dust and waterresistant and can withstand the highest loads.



#### All enclosures with transparent or opaque lids

#### Mi Power distribution boards up to 630 A

combinable enclosure system

insulation-enclosed, total insulated, degree of protection IP 65, for the assembly of power switchgear and controlgear assembly (PSC) up to 630 A in accordance with IEC 61 439 Part 2

- Boxes can also be used as a single box
- Degree of protection IP 65: dust-proof and jet water-proof
- Application area: Mi enclosures are suitable for indoor and outdoor installation harsh environment and /or outdoor.

#### Material:

- Polycarbonate
- Burning behaviour: Glow wire test in accordance with IEC 60 695-2-11, self-extinguishing, flame-retardant
- UV-resistance in accordance with IEC 61 439-1, Clause 10.2.4: The material is examined for UV resistance.
- Toxic behaviour: silicone- and halogen-free
- Chemical resistance: resistant against acid, lye, benzene and mineral oil

#### **Enclosure System:**

- Covers made from thermoplastic
- Covers with protected and captive marking labels
- Cover plates for mounting electrical equipment
- Large wall openings enable the wiring within the distribution boards
- Cable entry via metric knockouts in all box walls, via flanges with metric knockouts or elastic membranes or cable inserts with up to 74 mm cable diameter
- Wall fixing right away in the boxes, via external brackets or via mounting profiles
- Facility for lead seal and locking
- Hinges for lids and heavy-duty hinge joints for operating installation device within a large area
- Connection Box for the installation of devices that must be operated externally, such as plugs, pushbuttons and switches
- Mi empty boxes and single empty boxes conform to the RoHS Directive 2002/95/EC





 modular enclosure system in grid of 150 mm

5 enclosure sizes: 150 x 300 mm, 300 x 300 mm, 450 x 300 mm, 600 x 300 mm and 600 x 600 mm

- for the assembly of typetested
   low-voltage switchgear
   assemblies
   up to 630 A
- Enclosures can be used as well as single boxes.



**CATZAD** 

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#### Assignment of box walls:

The assignment of box walls is effected via wall symbols that are assigned to each product. The individual figures 2 give an indication, which wall is concerned.

All box walls are listed in the fold-out of the coverpages.



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#### Mi Distribution boards Box walls with metric cable entries

Wall 1 1 x M 20 1 x M 32/40

Wall 2 2 x M 20 10 x M 25 1 x M 32/40

Wall 3 4 x M 25 3 x M 40/50

Wall 4 1 x M 20 4 x M 25 1 x M 32/40 3 x M 40/50

Wall 5 8 x M 32 4 x M 40/50



[8]

# 



#### Mi Distribution Boards System Benefits

# Tested and certified by ASTA





Suitable also for typical devices or the installation of armoured cables with earth connections

#### Application: Motor Control Centre based on Mi System

This Motor Control Centre installed in a big paper mill consists of 33 feeders ranging from 2.2 kW to 50 kW including complete wiring with main incomer of 630 A.

#### Application:

Removable DIN rail rack for integrated earth bounding in each Mi Circuit breaker box.

Cable entry for armoured cables via metal glands for earth connection according to British Standards.

Key	Bene	efits
-----	------	-------

-	
Material	Thermoplastic material
Corrosion-proof	yes
Degree of protection	IP 65 (dust proof, water proof)
Protection against mechanical impact	no lasting deformations, elastic
Weight	"light"
Subsequent handling (such as openings)	"easy"
Transparent lids	standard offer
Operating area	partial opening range via lids of individual enclosures
Adaptability to location	by arrangement of modular enclosures
Combinability / Expandability	in all directions by combinable enclosures including electrical functions
Availability in the market	immediately with standard modules and









Integrated earth bounding in each circuit breaker box

Cable entry for armoured cables via metal glands



#### Mi Distribution boards System Design Application Examples



# Combinable and extendable in all directions

Application examples

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#### Mi Distribution boards System Design Application Examples

Combinable and extendable in all directions

Application examples



Application with canopy





#### Mi Distribution boards Empty Boxes Circuit Breaker Boxes



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 Equipment can be installed via DIN rails which are fastened on spacers



 Equipment can be installed via mounting plates as well



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Installation of equipment in cover plates



Boxes can be assembled to larger units



 Blanking strips (attached) for unused sections in equipment openings of protection covers



 Facilities for earth connection according to British Standard



#### Mi Distribution Boards Empty Boxes with Transparent Lid

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1 Wall 1

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3 Wall 3

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3 Wall 3

2

2

3 Wall 3

2

-214→



#### Mi 0100

#### Built-in dimensions W 275 x H 125 x D 150 mm

- max. installation depth with built-in mounting plate 146 mm, with built-in DIN rail 135 mm
- box size 1
- please order DIN rails, mounting plates or covers additionally
- with transparent lid
- lid fasteners for tool operation

#### Mi 0200 Built-in d

#### Built-in dimensions W 275 x H 275 x T 150 mm

- max. installation depth with built-in mounting plate 146 mm, with built-in DIN rail 135 mm
- box size 2
- please order DIN rails, mounting plates or covers additionally
- with transparent lid
- lid fasteners for tool operation



### Mi 0210

#### Built-in dimensions W 275 x H 275 x D 195 mm

- max. installation depth with built-in mounting plate 191 mm, with built-in DIN rail 180 mm
- box size 2
- please order DIN rails, mounting plates or covers additionally
- with transparent lid
- lid fasteners for tool operation



#### Built-in dimensions W 275 x H 275 x D 119 mm

- max. installation depth with built-in mounting plate 115 mm, with built-in DIN rail 104 mm
- box size 2
- please order DIN rails, mounting plates or covers additionally
- with hinged lid for built-in equipment with protection cover which must be operated
  - with transparent lid
  - lid fasteners for tool operation



#### Mi 0300

#### Built-in dimensions W 275 x H 425 x D 150 mm

- max. installation depth with built-in mounting plate 146 mm, with built-in DIN rail 135 mm
- box size 3
- please order DIN rails, mounting plates or covers additionally
- with transparent lid
- lid fasteners for tool operation







#### Mi Distribution Boards **Empty Boxes with Transparent Lid**



### Mi 0310

#### Built-in dimensions W 275 x H 425 x D 195 mm

- max. installation depth with built-in mounting plate 191 mm, with built-in DIN rail 180 mm
- box size 3
- please order DIN rails, mounting plates or covers additionally
- with transparent lid
- lid fasteners for tool operation



#### **Mi 0400**

#### Built-in dimensions W 275 x H 575 x D 150 mm

- max. installation depth with built-in mounting plate 146 mm, with built-in DIN rail 135 mm
- box size 4
- please order DIN rails, mounting plates or covers additionally
- with transparent lid
- lid fasteners for tool operation



RAL

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2

5 Wall 5



#### Mi 0410

#### Built-in dimensions W 275 x H 575 x D 195 mm

- max. installation depth with built-in mounting plate 191 mm, with built-in DIN rail 180 mm
- box size 4
- please order DIN rails, mounting plates or covers additionally
- with transparent lid
- lid fasteners for tool operation



PC

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#### Mi 0800

#### Built-in dimensions W 575 x H 575 x D 150 mm

- max. installation depth with built-in mounting plate 146 mm, with built-in DIN rail 135 mm
- box size 8
- please order DIN rails, mounting plates or covers additionally
- cable entry only possible via flange
- with transparent lid
- lid fasteners for tool operation











#### 2 IP RAL PC 4 Wall 4 65 7032 2 **←**214→ 300 150







#### Mi 0401 Built-in dimensions W 275 x H 575 x D 150 mm max. installation depth with built-in mounting plate 146 mm, with built-in DIN rail 135 mm

box size 4 please order DIN rails, mounting plates or covers additionally

Built-in dimensions W 275 x H 425 x D 195 mm

max. installation depth with built-in mounting plate 191 mm,

please order DIN rails, mounting plates or covers additionally

Mi 0311

box size 3

with opaque lid

- with opaque lid
- lid fasteners for tool operation

with built-in DIN rail 180 mm

lid fasteners for tool operation



#### Mi 0411

#### Built-in dimensions W 275 x H 575 x D 195 mm

- max. installation depth with built-in mounting plate 191 mm, with built-in DIN rail 180 mm
- box size 4
- please order DIN rails, mounting plates or covers additionally
- with opaque lid
- Iid fasteners for tool operation





#### Mi 0801

#### Built-in dimensions W 575 x H 575 x D 150 mm

- max. installation depth with built-in mounting plate 146 mm, with built-in DIN rail 135 mm
- box size 8
- please order DIN rails, mounting plates or covers additionally
- cable entry only possible via flange
- with opaque lid
- lid fasteners for tool operation





Mi 1109

2



- with blanking strips for unused DIN rail openings
- lid fasteners for hand operation

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RAL

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5 Wall 5

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2 Wall 3



#### Mi 1448

#### 48 modules: 4 x 12 x 18 mm

- 4-row
- FIXCONNECT<sup>®</sup> plug-in terminal technology for PE and N
- per PE/N 6 x 25 mm<sup>2</sup>, 24 x 4 mm<sup>2</sup>, Cu
- N separable for various potentials
- for installation of DIN rail equipment in accordance with DIN 43 880
- with blanking strips for unused DIN rail openings
- lid fasteners for hand operation

#### Mi 1456

#### 56 modules: 2 x 28 x 18 mm

- 2-row
- FIXCONNECT<sup>®</sup> plug-in terminal technology for PE and N
- per PE/N 6 x 25 mm<sup>2</sup>, 24 x 4 mm<sup>2</sup>, Cu
- N separable for various potentials
- for installation of DIN rail equipment in accordance with DIN 43 880
- with blanking strips for unused DIN rail openings
- lid fasteners for hand operation
- with removable DIN rail rack and earth connection
- DIN rail rack can be earthed

#### Mi 1884

#### 84 modules: 3 x 28 x 18 mm

- 3-row
- FIXCONNECT<sup>®</sup> plug-in terminal technology for PE and N
- per PE/N 6 x 25 mm<sup>2</sup>, 24 x 4 mm<sup>2</sup>, Cu
- N separable for various potentials
- for installation of DIN rail equipment in accordance with DIN 43 880
- with blanking strips for unused DIN rail openings
- lid fasteners for hand operation
- with removable DIN rail rack and earth connection
- DIN rail rack can be earthed
- cable entry only possible via flange



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# **ENYMOD**



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3 Wall 3

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4 Wall 4

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lid fasteners for hand operation

#### Mi 1444

#### 48 modules: 4 x 12 x 18 mm

- 4-row
- with 4 hinged flaps
- hinged flap lockable with accessories
- FIXCONNECT<sup>®</sup> plug-in terminal technology for PE and N
- per PE/N 6 x 25 mm<sup>2</sup>, 24 x 4 mm<sup>2</sup>, Cu
- N separable for various potentials
- for installation of DIN rail equipment in accordance with DIN 43 880
- with blanking strips for unused DIN rail openings
- lid fasteners for hand operation



IP



Mi 1115 12 modules: 1 x 12 x 18 mm without PE and N terminal
Mi 1225 24 modules: 2 x 12 x 18 mm without PE and N terminal
Mi 1226 24 modules: 2 x 12 x 18 mm without PE and N terminal with hinged lid • 2-row • for installation of DIN rail equipment in accordance with DIN 43 880 • order PE/N terminals separately • with blanking strips for unused DIN rail openings • lid fasteners for hand operation
Mi 1335 36 modules: 3 x 12 x 18 mm without PE and N terminal 9 3-row 9 for installation of DIN rail equipment in accordance with DIN 43 880 9 order PE/N terminals separately 9 with blanking strips for unused DIN rail openings 9 lid fasteners for hand operation
Mi 1440 36 modules: 3 x 12 x 18 mm without PE and N terminal with additional DIN rail 4-row 4-row 4 vith 1 DIN rail 216 mm wide (for installation depth of 72 mm) 5 or installation of DIN rail equipment in accordance with DIN 43 880 5 order PE/N terminals separately 5 with blanking strips for unused DIN rail openings 5 lid fasteners for hand operation

- order PE/N terminals separately
  with blanking strips for unused DIN rail openings
  lid fasteners for hand operation



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2 Wall 3

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#### Mi 1455

# 56 modules: 2 x 28 x 18 mm without PE and N terminal

- 2-row
- for installation of DIN rail equipment in accordance with DIN 43 880
- order PE/N terminals separately
- with blanking strips for unused DIN rail openings
- lid fasteners for hand operation
- with removable DIN rail rack and earth connection

#### Mi 1885

# 84 modules: 3 x 28 x 18 mm without PE and N terminal

- 3-row
- for installation of DIN rail equipment in accordance with DIN 43 880
- order PE/N terminals separately
- with blanking strips for unused DIN rail openings
- lid fasteners for hand operation
- with removable DIN rail rack and earth connection
- cable entry only possible via flange



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Assembly example: Removable DIN rail rack for earth connection









#### Mi 1281

6 modules: 1 x 6 x 18 mm for miniature circuit breakers (MCB)

- 1-row
- with 1-pole main branch terminal for copper conductors
  - protection cover can be sealed, with lockable cover strip
- lid fasteners for hand operation
- PEN 2x 25mm<sup>2</sup>, 2 x 16mm<sup>2</sup>, Cu



Note: Prepared for the installation of currently commercially available miniature circuit-breakers (MDB)

ÿ <del>\_</del>

for example ABN Type XHA 3..-4 Hager Type HTN..E etc. SHA (voltage dependent)



for example ABB Type S 701/S 703 + adapter for DIN rail S 700 BT3 (1 pc. for S 701, 2 pc. for S 703) SHU (voltage dependent)



for example ABB Type S 80.-... SHU (voltage dependent)



#### Mi Distribution Boards **Meter Box**

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4 Wall 4

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#### Mi 2200

#### max. installation depth: 146 mm with meter fixing screws

- use in unmetered area after consultation with local power supply companies
- for meters with three-point mounting
- lid fasteners for tool operation
- can be sealed twice

#### Mi 2300

#### max. installation depth: 146 mm with meter fixing screws

- use in unmetered area after consultation with local power supply companies
- for meters with three-point mounting
- lid fasteners for tool operation
- can be sealed twice

### Mi 2310

#### max. installation depth: 190 mm with meter fixing screws

- use in unmetered area after consultation with local power supply companies
- for meters with three-point mounting
- lid fasteners for tool operation
- can be sealed twice



#### max. installation depth: 146 mm with KWH meter support and DIN rail

- use in unmetered area after consultation with local power supply companies
- for meters with three-point mounting
- lid fasteners for tool operation
- can be sealed twice



### Mi 2410

#### max. installation depth: 190 mm with KWH meter support and DIN rail

- use in unmetered area after consultation with local power supply companies
- for meters with three-point mounting
- lid fasteners for tool operation
- can be sealed twice











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#### IP PC 4 Wall 4 65 7032 2



#### **Mi Distribution Boards Meter Box**

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Mi	2413
ma wit wir	x. installation depth: 190 mm h KWH meter support and KWH mete ndow flap
V	vithout DIN rail
📕 fo	or maximum KWH meters, time switches etc.
📕 fo	or tool or manual operation
📕 fo	or padlock (clip Ø max. 6 mm)

- standard opening dimensions 140 x 310 mm
- use in unmetered area after consultation with local
- power supply companies
- for meters with three-point mounting
- lid fasteners for tool operation
- can be sealed twice

### Mi 2420

#### max. installation depth: 146 mm with KWH meter support, hinged flap (12 modules)

- hinged flap with protection cover for 12 modules (1 x 12 x 18 mm) and associated DIN rail
- use in unmetered area after consultation with local power supply companies
- for meters with three-point mounting
- Iid fasteners for tool operation
- can be sealed twice

#### Mi 2800

#### max. installation depth: 146 mm with 3 KWH meter supports and DIN rail

- cable entry only possible via flange
- use in unmetered area after consultation with local power supply companies
- for meters with three-point mounting
- lid fasteners for tool operation
- can be sealed twice





### Mi 2820

#### max. installation depth: 146 mm with 3 KWH meter supports, hinged flap (12 modules)

- hinged flap with protection cover for 12 modules (1 x 12 x 18 mm) and associated DIN rail
- use in unmetered area after consultation with local power supply companies
- for meters with three-point mounting
- lid fasteners for tool operation
- can be sealed twice
- cable entry only possible via flange













2

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5 Wall 5









HRC fuse box with fuse elements, 3-pole, in accordance with IEC 60 269



#### 1 x HRC 00, 3-pole Busbar rated current: 250 A

- busbar 5-pole, dimensions busbars: L1-L3: 12 x 10 mm, N: 12 x 5 mm, PE: 12 x 5 mm
- terminals for outgoing cables 4-35 mm<sup>2</sup>, terminals for incoming terminals 25-70 mm<sup>2</sup>, Cu connection Mi VS 100/160/250/400 (for terminal technology refer to index technical data)
- (for terminal technology refer to index technical data
- with PE and N for copper conductors
- 1 terminal per PE+N
- N conductor with the same current carrying capacity as the phase conductors
- max. rated current fuse holder: 125 A
- with cover
- outgoings at the top
- lid fasteners for tool operation

centreline spacing of busbars	60 mm
rated voltage	AC 690 V
tightening torque for terminal	<ul><li>3.0 Nm terminal connection with saddle clamping unit</li><li>12.0 Nm screw connection M8</li></ul>

#### Mi 6213



1 x HRC 00, 3-pole Busbar rated current: 400 A
Bushar 5-polo

- Busbar 5-pole,
  Dimensions busbars:
  L1-L3: 20 x 10 mm, N: 12 x 10 mm, PE: 12 x 5 mm
- terminals for outgoing cables 4-35 mm<sup>2</sup>, terminals for incoming terminals 25-70 mm<sup>2</sup>, Cu connection Mi VS 100/160/250/400 (for terminal technology refer to index technical data)
- with PE and N for copper conductors
- 1 terminal per PE+N
- N conductor with the same current carrying capacity as the phase conductors
- max. rated current fuse holder: 125 A
- with cover
- outgoings at the top
- lid fasteners for tool operation

centreline spacing of busbars	60 mm
rated voltage	AC 690 V
tightening torque for terminal	<ul><li>3.0 Nm terminal connection with saddle clamping unit</li><li>12.0 Nm screw connection M8</li></ul>









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HRC fuse box with fuse elements, 3-pole, in accordance with IEC 60 269



#### Mi 6214

#### 1 x HRC 00, 3-pole Busbar rated current: 630 A}

- Busbar 5-pole, Dimensions busbars: L1-L3: 30 x 10 mm, N: 25 x 10 mm, PE: 12 x 10 mm
- terminals for outgoing cables 4-35 mm<sup>2</sup>, terminals for incoming terminals 25-70 mm<sup>2</sup>, Cu connection Mi VS 100/160/250/400 (for terminal technology refer to index technical data)
- with PE and N for copper conductors
- 1 terminal per PE+N
- N conductor with the same current carrying capacity as the phase conductors
- max, rated current fuse holder: 125 A
- with cover
- outgoings at the top
- lid fasteners for tool operation

centreline spacing of busbars	60 mm	
rated voltage	AC 690 V	
tightening torque for terminal	<ul><li>3.0 Nm terminal connection with saddle clamping unit</li><li>12.0 Nm screw connection M8</li></ul>	

#### Mi 6422

1stelelele **NORTHON** 

#### 2 x HRC 00, 3-pole Busbar rated current: 250 A

- busbar 5-pole, dimensions busbars: L1-L3: 12 x 10 mm, N: 12 x 5 mm, PE: 12 x 5 mm
- terminals for outgoing cables 4-35 mm<sup>2</sup>, terminals for incoming terminals 25-70 mm<sup>2</sup>, Cu connection Mi VS 100/160/250/400 (for terminal technology refer to index technical data)
- with PE and N for copper conductors
- 2 terminals per PE+N
- N conductor with the same current carrying capacity as the phase conductors
- max. rated current fuse holder: 125 A
- with cover
- outgoings at the top
- lid fasteners for tool operation

centreline spacing of busbars	60 mm
rated voltage	AC 690 V
tightening torque for terminal	3.0 Nm terminal connection with saddle clamping unit







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2 Wall 2



HRC fuse box with fuse elements, 3-pole, in accordance with IEC 60 269



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#### Mi 6423

#### 2 x HRC 00, 3-pole **Busbar rated current: 400 A**

- Busbar 5-pole, Dimensions busbars: L1-L3: 20 x 10 mm, N: 12 x 10 mm, PE: 12 x 5 mm
- terminals for outgoing cables 4-35 mm<sup>2</sup>, terminals for incoming terminals 25-70 mm<sup>2</sup>, Cu connection Mi VS 100/160/250/400 (for terminal technology refer to index technical data)
- with PE and N for copper conductors
- 2 terminals per PE+N
- N conductor with the same current carrying capacity as the phase conductors
- max. rated current fuse holder: 125 A
- with cover
- outgoings at the top
- lid fasteners for tool operation

centreline spacing of busbars	60 mm
rated voltage	AC 690 V
tightening torque for terminal	<ul><li>3.0 Nm terminal connection with saddle clamping unit</li><li>12.0 Nm screw connection M8</li></ul>

#### Mi 6424

#### 2 x HRC 00, 3-pole Busbar rated current: 630 A

- Busbar 5-pole, Dimensions busbars: L1-L3: 30 x 10 mm, N: 25 x 10 mm, PE: 12 x 10 mm
- terminals for outgoing cables 4-35 mm<sup>2</sup>, terminals for incoming terminals 25-70 mm<sup>2</sup>, Cu connection Mi VS 100/160/250/400 (for terminal technology refer to index technical data)
- with PE and N for copper conductors
- 2 terminals per PE+N
- N conductor with the same current carrying capacity as the phase conductors
- max. rated current fuse holder: 125 A
- with cover
- outgoings at the top
- lid fasteners for tool operation

centreline spacing of busbars	60 mm
rated voltage	AC 690 V
tightening torque for terminal	<ul><li>3.0 Nm terminal connection with saddle clamping unit</li><li>12.0 Nm screw connection M8</li></ul>







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↓b	PEd



HRC fuse box with fuse elements, 3-pole, in accordance with IEC 60 269



#### Mi 6432

#### 3 x HRC 00, 3-pole **Busbar rated current: 250 A**

- busbar 5-pole, dimensions busbars: L1-L3: 12 x 10 mm, N: 12 x 5 mm, PE: 12 x 5 mm
- terminals for outgoing cables 4-35 mm<sup>2</sup>, terminals for incoming terminals 25-70 mm<sup>2</sup>, Cu connection Mi VS 100/160/250/400
- (for terminal technology refer to index technical data)
- with PE and N for copper conductors
- 3 terminals per PE+N
- N conductor with the same current carrying capacity as the phase conductors
- max, rated current fuse holder: 125 A
- with cover
- outgoings at the top
- lid fasteners for tool operation

centreline spacing of busbars	60 mm
rated voltage	AC 690 V
tightening torque for terminal	3.0 Nm terminal connection with saddle clamping unit
	12.0 MIT SCIEW CONNECTION NO

#### Mi 6433



#### 3 x HRC 00, 3-pole Busbar rated current: 400 A

- Busbar 5-pole, Dimensions busbars: L1-L3: 20 x 10 mm, N: 12 x 10 mm, PE: 12 x 5 mm
- terminals for outgoing cables 4-35 mm<sup>2</sup>, terminals for incoming terminals 25-70 mm<sup>2</sup>, Cu connection Mi VS 100/160/250/400 (for terminal technology refer to index technical data)
- with PE and N for copper conductors
- 3 terminals per PE+N
- N conductor with the same current carrying capacity as the phase conductors
- max. rated current fuse holder: 125 A
- with cover
- outgoings at the top
- lid fasteners for tool operation

centreline spacing of busbars	60 mm
rated voltage	AC 690 V
tightening torque for terminal	3.0 Nm terminal connection with saddle clamping unit
	12.0 Nm screw connection M8



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#### **Mi Distribution Boards**

HRC fuse box with fuse elements, 3-pole, in accordance with IEC 60 269

#### Mi 6434

#### 3 x HRC 00, 3-pole Busbar rated current: 630 A

- Busbar 5-pole, Dimensions busbars: L1-L3: 30 x 10 mm, N: 25 x 10 mm, PE: 12 x 10 mm
- terminals for outgoing cables 4-35 mm<sup>2</sup>, terminals for incoming terminals 25-70 mm<sup>2</sup>, Cu connection Mi VS 100/160/250/400 (for terminal technology refer to index technical data)
- with PE and N for copper conductors
- 3 terminals per PE+N
- N conductor with the same current carrying capacity as the phase conductors
- max. rated current fuse holder: 125 A
- with cover
- outgoings at the top
- lid fasteners for tool operation

centreline spacing of busbars	60 mm
rated voltage	AC 690 V
tightening torque for terminal	3.0 Nm terminal connection with saddle clamping unit
	12.0 Nm screw connection M8

#### Mi 6461

#### 4 x HRC 00, 3-pole Busbar rated current: 250 A only for combination

- busbar 5-pole, dimensions busbars: L1-L3: 12 x 10 mm, N: 12 x 5 mm, PE: 12 x 5 mm
- terminals for outgoing cables 4-35 mm<sup>2</sup>, Cu (for terminal technology refer to index technical data)
- rated connecting capacity without terminals for incoming cables (for terminal technology refer to index technical data)
- with PE and N for copper conductors
- 4 terminals per PE+N
- N conductor with the same current carrying capacity as the phase conductors
- max. rated current fuse holder: 125 A
- with cover
- outgoings at the top
- lid fasteners for tool operation

centreline spacing of busbars	60 mm
rated voltage	AC 690 V
tightening torque for terminal	3.0 Nm terminal connection with
	saddle clamping unit
	12.0 Nm screw connection M8



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HRC fuse box with fuse elements, 3-pole, in accordance with IEC 60 269



#### Mi 6462

#### 4 x HRC 00, 3-pole Busbar rated current: 400 A only for combination

- Busbar 5-pole,
   Dimensions busbars:
   L1-L3: 20 x 10 mm, N: 12
  - L1-L3: 20 x 10 mm, N: 12 x 10 mm, PE: 12 x 5 mm
- terminals for outgoing cables 4-35 mm<sup>2</sup>, Cu (for terminal technology refer to index technical data)
- rated connecting capacity without terminals for incoming cables (for terminal technology refer to index technical data)
- with PE and N for copper conductors
- 4 terminals per PE+N
- N conductor with the same current carrying capacity as the phase conductors
- max. rated current fuse holder: 125 A
- with cover
- outgoings at the top
- lid fasteners for tool operation

centreline spacing of busbars	60 mm
rated voltage	AC 690 V
tightening torque for terminal	3.0 Nm terminal connection with
	saddle clamping unit
	12.0 Nm screw connection M8



#### Mi 6463

#### 4 x HRC 00, 3-pole Busbar rated current: 630 A only for combination

- Busbar 5-pole, Dimensions busbars: L1-L3: 30 x 10 mm, N: 25 x 10 mm, PE: 12 x 10 mm
- terminals for outgoing cables 4-35 mm<sup>2</sup>, Cu (for terminal technology refer to index technical data)
   rated connecting capacity without terminals for incoming cables
- (for terminal technology refer to index technical data)
   with PE and N for copper conductors
- 4 terminals per PE+N
- N conductor with the same current carrying capacity as the phase conductors
- max. rated current fuse holder: 125 A
- with cover
- outgoings at the top
- lid fasteners for tool operation

centreline spacing of busbars	60 mm
rated voltage	AC 690 V
tightening torque for terminal	3.0 Nm terminal connection with saddle clamping unit
	12.0 Nm screw connection M8





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HRC fuse box with fuse elements, 3-pole, in accordance with IEC 60 269



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#### 1 x HRC 1, 3pole Busbar rated current: 400 A

- Busbar 5-pole,
   Dimensions busbars:
   L1-L3: 20 x 10 mm, N: 12 x 10 mm, PE: 12 x 5 mm
- rated connecting capacity connection M 10 (for terminal technology refer to index technical data)
- with PE and N terminals
- 1 terminal per PE+N
- N conductor with the same current carrying capacity as the phase conductors
- maximum rated current use of fuses: 250 A
- can be combined with Mi-Busbar boxes 250 A or 400 A
- lid fasteners for tool operation

centreline spacing of busbars	60 mm
rated voltage	AC 690 V
tightening torque for terminal	20,0 Nm

#### Mi 6475

#### 1 x HRC 1, 3pole Busbar rated current: 630 A

- Busbar 5-pole, Dimensions busbars: L1-L3: 30 x 10 mm, N: 25 x 10 mm, PE: 12 x 10 mm
- rated connecting capacity connection M 10 (for terminal technology refer to index technical data)
- with PE and N terminals
- 1 terminal per PE+N
- N conductor with the same current carrying capacity as the phase conductors
- maximum rated current use of fuses: 250 A
- can be combined with Mi-Busbar boxes 630 A
- lid fasteners for tool operation

centreline spacing of busbars	60 mm
rated voltage	AC 690 V
tightening torque for terminal	20,0 Nm

### Mi 6476

#### 1 x HRC 2, 3pole Busbar rated current: 400 A

- Busbar 5-pole,
   Dimensions busbars:
   L1-L3: 20 x 10 mm, N: 12 x 10 mm, PE: 12 x 5 mm
- rated connecting capacity connection M 10 (for terminal technology refer to index technical data)
- with PE and N terminals
- 1 terminal per PE+N
- N conductor with the same current carrying capacity as the phase conductors
- maximum rated current use of fuses: 400 A
- can be combined with Mi-Busbar boxes 250 A or 400 A
- lid fasteners for tool operation

centreline spacing of busbars	60 mm
rated voltage	AC 690 V
tightening torque for terminal	20,0 Nm











HRC fuse box with fuse elements, 3-pole, in accordance with IEC 60 269



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#### Mi 6477

#### 1 x HRC 2, 3pole Busbar rated current: 630 A

- Busbar 5-pole, Dimensions busbars: L1-L3: 30 x 10 mm, N: 25 x 10 mm, PE: 12 x 10 mm
- rated connecting capacity connection M 10 (for terminal technology refer to index technical data)
- with PE and N terminals
- 1 terminal per PE+N
- N conductor with the same current carrying capacity as the phase conductors
- maximum rated current use of fuses: 400 A
- can be combined with Mi-Busbar boxes 630 A
- lid fasteners for tool operation

centreline spacing of busbars	60 mm
rated voltage	AC 690 V
tightening torque for terminal	20,0 Nm

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# HRC fuse boxes with fuse switch disconnectors with fuse switch disconnectors in accordance with IEC 60 947-3



#### Mi 6226

#### 1 x HRC 00, 3-pole Busbar rated current: 250 A

- busbar 5-pole, dimensions busbars: L1-L3: 12 x 10 mm, N: 12 x 5 mm, PE: 12 x 5 mm
- terminals for outgoing cables 4-35 mm<sup>2</sup>, terminals for incoming terminals 25-70 mm<sup>2</sup>, Cu connection Mi VS 100/160/250/400 (for terminal technology refer to index technical data)
  - (for terminal technology refer to index technical dat
- with PE and N for copper conductors
- 1 terminal per PE+N
- max. rated current fuse holder: 125 A
- N conductor with the same current carrying capacity as the phase conductors
- outgoing cables can be changed to top or bottom
- with cover
- lid fasteners for tool operation

centreline spacing of busbars	60 mm
rated voltage	AC 690 V
tightening torque for terminal	terminal 6.0 Nm

#### Mi 6227

#### 1 x HRC 00, 3-pole Busbar rated current: 400 A

- Busbar 5-pole, Dimensions busbars: L1-L3: 20 x 10 mm, N: 12 x 10 mm, PE: 12 x 5 mm
  terminals for outgoing cables 4-35 mm<sup>2</sup>,
- terminals for outgoing cables 4-35 mm<sup>2</sup>, terminals for incoming terminals 25-70 mm<sup>2</sup>, Cu connection Mi VS 100/160/250/400 (for terminal technology refer to index technical data)
- with PE and N for copper conductors
- 1 terminal per PE+N
- max. rated current fuse holder: 125 A
- N conductor with the same current carrying capacity as the phase conductors
- outgoing cables can be changed to top or bottom
- with cover
- lid fasteners for tool operation

centreline spacing of busbars	60 mm
rated voltage	AC 690 V
tightening torque for terminal	terminal 6.0 Nm



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#### HRC fuse boxes with fuse switch disconnectors with fuse switch disconnectors in accordance with IEC 60 947-3



<ul> <li>Mi 6228</li> <li>1 x HRC 00, 3-pole</li> <li>Busbar rated current: 630 A</li> <li>Busbar 5-pole, Dimensions bush N: 25 x 10 mm, PE: 12 x 10 mm</li> <li>terminals for outgoing cables 4-3 terminals 25-70 mm<sup>2</sup>, Cu connection Mi VS 100/160/250/ (for terminal technology refer to i</li> <li>with PE and N for copper condu</li> <li>1 terminal per PE+N</li> <li>max. rated current fuse holder: 1</li> <li>N conductor with the same current phase conductors</li> </ul>	25 A ent carrying capacity as the	
<ul> <li>outgoing cables can be changed</li> <li>with cover</li> <li>lid fasteners for tool operation</li> <li>centreline spacing of busbars</li> <li>rated voltage</li> <li>tightening torque for terminal</li> </ul>	60 mm AC 690 V terminal 6.0 Nm	
Mi 6265 2 x HRC 00, 3-pole Busbar rated current: 250 A only for combination busbar 5-pole, dimensions busb N: 12 x 5 mm, PE: 12 x 5 mm terminals for outgoing cables 4-3 (for terminal technology refer to i with PE and N for copper condu 2 terminals per PE+N max. rated current fuse holder: 1 N conductor with the same current phase conductors outgoing cables can be changed	ars: L1-L3: 12 x 10 mm, 35 mm², Cu without supply cable ndex technical data) ctors 25 A ent carrying capacity as the d to top or bottom	
<ul> <li>lid fasteners for tool operation</li> <li>centreline spacing of busbars</li> </ul>	60 mm	



# HRC fuse boxes with fuse switch disconnectors with fuse switch disconnectors in accordance with IEC 60 947-3

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#### Mi 6266 3 IP RAL PC 2 Wall 2 65 7032 2 x HRC 00, 3-pole 3 **Busbar rated current: 400 A** only for combination Busbar 5-pole, Dimensions busbars: L1-L3: 20 x 10 mm, N: 12 x 10 mm, PE: 12 x 5 mm terminals for outgoing cables 4-35 mm<sup>2</sup>, Cu without supply cable (for terminal technology refer to index technical data) with PE and N for copper conductors 2 terminals per PE+N max. rated current fuse holder: 125 A N conductor with the same current carrying capacity as the phase conductors outgoing cables can be changed to top or bottom with cover lid fasteners for tool operation centreline spacing of busbars 60 mm tightening torque for terminal terminal 6.0 Nm rated voltage Ue= AC 690 V Mi 6267 3 IP RAL PC 2 Wall 2 2 x HRC 00, 3-pole 65 7032 3 Busbar rated current: 630 A only for combination Busbar 5-pole, Dimensions busbars: L1-L3: 30 x 10 mm, N: 25 x 10 mm, PE: 12 x 10 mm terminals for outgoing cables 4-35 mm<sup>2</sup>, Cu without supply cable (for terminal technology refer to index technical data) with PE and N for copper conductors 2 terminals per PE+N max. rated current fuse holder: 125 A N conductor with the same current carrying capacity as the phase conductors outgoing cables can be changed to top or bottom with cover lid fasteners for tool operation centreline spacing of busbars 60 mm tightening torque for terminal terminal 6.0 Nm rated voltage Ue= AC 690 V



# HRC fuse boxes with fuse switch disconnectors with fuse switch disconnectors in accordance with IEC 60 947-3



#### Mi 6426

#### 2 x HRC 00, 3-pole Busbar rated current: 250 A

- busbar 5-pole, dimensions busbars: L1-L3: 12 x 10 mm, N: 12 x 5 mm, PE: 12 x 5 mm
- terminals for outgoing cables 4-35 mm<sup>2</sup>, terminals for incoming terminals 25-70 mm<sup>2</sup>, Cu connection Mi VS 100/160/250/400
   (for terminal technology refer to index technical data
- (for terminal technology refer to index technical data)
- with PE and N for copper conductors
- 2 terminals per PE+N
- max. rated current fuse holder: 125 A
- N conductor with the same current carrying capacity as the phase conductors
- outgoing cables can be changed to top or bottom
- with cover
- lid fasteners for tool operation

centreline spacing of busbars	60 mm
rated voltage	AC 690 V
tightening torque for terminal	terminal 6.0 Nm

#### Mi 6427

#### 2 x HRC 00, 3-pole Busbar rated current: 400 A

- Busbar 5-pole,
   Dimensions busbars:
   L1-L3: 20 x 10 mm, N: 12 x 10 mm, PE: 12 x 5 mm
   terminale for outgoing cables 4.25 mm<sup>2</sup> terminale for incomentations.
- terminals for outgoing cables 4-35 mm<sup>2</sup>, terminals for incoming terminals 25-70 mm<sup>2</sup>, Cu connection Mi VS 100/160/250/400 (for terminal technology refer
- to index technical data) with PE and N for copper conductors
- 2 terminals per PE+N
- max. rated current fuse holder: 125 A
- N conductor with the same current carrying capacity as the phase conductors
- outgoing cables can be changed to top or bottom
- with cover
- lid fasteners for tool operation

centreline spacing of busbars	60 mm
rated voltage	AC 690 V
tightening torque for terminal	terminal 6.0 Nm







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#### HRC fuse boxes with fuse switch disconnectors with fuse switch disconnectors in accordance with IEC 60 947-3



#### 2 x HRC 00, 3-pole Busbar rated current: 630 A

- Busbar 5-pole, Dimensions busbars: L1-L3: 30 x 10 mm, N: 25 x 10 mm, PE: 12 x 10 mm
- terminals for outgoing cables 4-35 mm<sup>2</sup>, terminals for incoming terminals 25-70 mm<sup>2</sup>, Cu connection Mi VS 100/160/250/400
- (for terminal technology refer to index technical data)
- with PE and N for copper conductors
- 2 terminals per PE+N
- N conductor with the same current carrying capacity as the phase conductors
- max. rated current fuse holder: 125 A
- outgoing cables can be changed to top or bottom
- with cover
- lid fasteners for tool operation

centreline spacing of busbars	60 mm
rated voltage	AC 690 V
tightening torque for terminal	terminal 6.0 Nm

#### Mi 6436

#### 3 x HRC 00, 3-pole Busbar rated current: 250 A

- busbar 5-pole, dimensions busbars: L1-L3: 12 x 10 mm, N: 12 x 5 mm, PE: 12 x 5 mm
- terminals for outgoing cables 4-35 mm<sup>2</sup>, terminals for incoming terminals 25-70 mm<sup>2</sup>, Cu connection Mi VS 100/160/250/400 (for terminal technology refer to index technical data)
- with PE and N for copper conductors
- 3 terminals per PE+N
- N conductor with the same current carrying capacity as the phase conductors
- max. rated current fuse holder: 125 A
- outgoing cables can be changed to top or bottom
- with cover
- lid fasteners for tool operation

centreline spacing of busbars	60 mm
rated voltage	AC 690 V
tightening torque for terminal	terminal 6.0 Nm



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# HRC fuse boxes with fuse switch disconnectors with fuse switch disconnectors in accordance with IEC 60 947-3



- 3 x HRC 00, 3-pole Busbar rated current: 400 A
- Busbar 5-pole,
   Dimensions busbars:
   L1-L3: 20 x 10 mm, N: 12 x 10 mm, PE: 12 x 5 mm
- terminals for outgoing cables 4-35 mm<sup>2</sup>, terminals for incoming terminals 25-70 mm<sup>2</sup>, Cu connection Mi VS 100/160/250/400 (for terminal technology refer to index technical data)
- with PE and N for copper conductors
- 3 terminals per PE+N
- N conductor with the same current carrying capacity as the phase conductors
- max. rated current fuse holder: 125 A
- outgoing cables can be changed to top or bottom
- with cover

Mi 6437

lid fasteners for tool operation

centreline spacing of busbars	60 mm
rated voltage	AC 690 V
tightening torque for terminal	terminal 6.0 Nm

# Mi 6438

# 3 x HRC 00, 3-pole Busbar rated current: 630 A

- Busbar 5-pole, Dimensions busbars: L1-L3: 30 x 10 mm, N: 25 x 10 mm, PE: 12 x 10 mm
- terminals for outgoing cables 4-35 mm<sup>2</sup>, terminals for incoming terminals 25-70 mm<sup>2</sup>, Cu connection Mi VS 100/160/250/400 (for terminal technology refer to index technical data)
- with PE and N for copper conductors
- 3 terminals per PE+N
- N conductor with the same current carrying capacity as the phase conductors
- max. rated current fuse holder: 125 A
- outgoing cables can be changed to top or bottom
- with cover
- lid fasteners for tool operation

centreline spacing of busbars	60 mm
rated voltage	AC 690 V
tightening torque for terminal	terminal 6.0 Nm



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# HRC fuse boxes with fuse switch disconnectors with fuse switch disconnectors in accordance with IEC 60 947-3



# Mi 6465

#### 4 x HRC 00, 3-pole Busbar rated current: 250 A only for combination

- busbar 5-pole, dimensions busbars: L1-L3: 12 x 10 mm, N: 12 x 5 mm, PE: 12 x 5 mm
- terminals for outgoing cables 4-35 mm<sup>2</sup>, Cu without supply cable (for terminal technology refer to index technical data)
- with PE and N for copper conductors
- 4 terminals per PE+N
- N conductor with the same current carrying capacity as the phase conductors
- max. rated current fuse holder: 125 A
- outgoing cables can be changed to top or bottom
- with cover
- lid fasteners for tool operation

centreline spacing of busbars	60 mm
rated voltage	AC 690 V
tightening torque for terminal	terminal 6.0 Nm

# Mi 6466

#### 4 x HRC 00, 3-pole Busbar rated current: 400 A only for combination

- Busbar 5-pole,
   Dimensions busbars:
   L1-L3: 20 x 10 mm, N: 12 x 10 mm, PE: 12 x 5 mm
- terminals for outgoing cables 4-35 mm<sup>2</sup>, Cu without supply cable (for terminal technology refer to index technical data)
- with PE and N for copper conductors
- 4 terminals per PE+N
- N conductor with the same current carrying capacity as the phase conductors
- max. rated current fuse holder: 125 A
- outgoing cables can be changed to top or bottom
- with cover
- lid fasteners for tool operation

centreline spacing of busbars	60 mm
rated voltage	AC 690 V
tightening torque for terminal	terminal 6.0 Nm





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# HRC fuse boxes with fuse switch disconnectors with fuse switch disconnectors in accordance with IEC 60 947-3



# Mi 6467

#### 4 x HRC 00, 3-pole Busbar rated current: 630 A only for combination

- Busbar 5-pole, Dimensions busbars: L1-L3: 30 x 10 mm, N: 25 x 10 mm, PE: 12 x 10 mm
- terminals for outgoing cables 4-35 mm<sup>2</sup>, Cu without supply cable (for terminal technology refer to index technical data)
- with PE and N for copper conductors
- 4 terminals per PE+N
- N conductor with the same current carrying capacity as the phase conductors
- max. rated current fuse holder: 125 A
- outgoing cables can be changed to top or bottom
- with cover
- lid fasteners for tool operation

centreline spacing of busbars	60 mm
rated voltage	AC 690 V
tightening torque for terminal	terminal 6.0 Nm



# Mi 6478

# 1 x HRC 1, 3pole Busbar rated current: 400 A

- Busbar 5-pole, Dimensions busbars: L1-L3: 20 x 10 mm, N: 12 x 10 mm, PE: 12 x 5 mm
  connection: M 10
- (for terminal technology refer to index technical data)
- with PE and N terminals
- 1 terminal per PE+N
- N conductor with the same current carrying capacity as the phase conductors
- maximum rated current use of fuses: 250 A
- outgoing cable changeable above or below
- can be combined with Mi-Busbar boxes 250 A or 400 A
- lid fasteners for tool operation

centreline spacing of busbars	60 mm
rated voltage	AC 690 V
tightening torque for terminal	20,0 Nm



# Mi 6479

# 1 x HRC 1, 3pole Busbar rated current: 630 A

- Busbar 5-pole, Dimensions busbars: L1-L3: 30 x 10 mm,
   N: 25 x 10 mm, PE: 12 x 10 mm
- connection: M 10 (for terminal technology refer to index technical data)
- with PE and N terminals
- 1 terminal per PE+N
- N conductor with the same current carrying capacity as the phase conductors
- maximum rated current use of fuses: 250 A
- can be combined with Mi-Busbar boxes 630 A
- lid fasteners for tool operation

centreline spacing of busbars	60 mm
rated voltage	AC 690 V
tightening torque for terminal	20,0 Nm



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# Mi 6252

# Busbar rated current: 250 A

- busbar 5-pole, dimensions busbars: L1-L3: 12 x 10 mm, N: 12 x 5 mm, PE: 12 x 5 mm
- N conductor with the same current carrying capacity as the phase conductors
- distance between busbar supports to be equipped: 225 mm
- without supply cable
- lid fasteners for tool operation

rated peak withstand current	30 kA
resistance (ipk)	
centreline spacing of busbars	60 mm

# Mi 6255

# **Busbar rated current: 400 A**

- Busbar 5-pole, Dimensions busbars:
- L1-L3: 20 x 10 mm, N: 12 x 10 mm, PE: 12 x 5 mm
- distance between busbar supports to be equipped: 225 mm N conductor with the same current carrying capacity as the phase conductors
- without supply cable
- lid fasteners for tool operation

rated peak withstand current	30 kA
resistance (lpk)	
centreline spacing of busbars	60 mm

# Mi 6256

# Busbar rated current: 630 A}

- Busbar 5-pole, Dimensions busbars: L1-L3: 30 x 10 mm, N: 25 x 10 mm, PE: 12 x 10 mm
  - distance between busbar supports to be equipped: 225 mm
- N conductor with the same current carrying capacity as the phase conductors
- without supply cable
- lid fasteners for tool operation

rated peak withstand current resistance (lpk)	45 kA
centreline spacing of busbars	60 mm

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# Mi 6352 Busbar rated current: 250 A

- busbar 5-pole, dimensions busbars: L1-L3: 12 x 10 mm,
- N: 12 x 5 mm, PE: 12 x 5 mm distance between busbar supports to be equipped: 225 mm
- N conductor with the same current carrying capacity as the phase conductors
- without supply cable

lid fasteners for tool operation

rated peak withstand current resistance (lpk)	30 kA
centreline spacing of busbars	60 mm











- **Busbar rated current: 400 A**  Busbar 5-pole, Dimensions busbars: L1-L3: 20 x 10 mm, N: 12 x 10 mm, PE: 12 x 5 mm distance between busbar supports to be equipped: 225 mm
- . N conductor with the same current carrying capacity as the phase conductors
- without supply cable

Mi 6355

lid fasteners for tool operation 

rated peak withstand current resistance (lpk)	30 kA
centreline spacing of busbars	60 mm







# Mi 6356 Busbar rated current: 630 A

# Busbar 5-pole, Dimensions busbars: L1-L3: 30 x 10 mm, N: 25 x 10 mm, PE: 12 x 10 mm

- distance between busbar supports to be equipped: 225 mm
- N conductor with the same current carrying capacity as the phase conductors
- without supply cable
- lid fasteners for tool operation

rated peak withstand current	45 kA
resistance (lpk)	
centreline spacing of busbars	60 mm

# Mi 6457

# Busbar rated current: 250 A

- busbar 5-pole, dimensions busbars: L1-L3: 12 x 10 mm, N: 12 x 5 mm, PE: 12 x 5 mm
- distance between busbar supports to be equipped: 225 mm
- N conductor with the same current carrying capacity as the phase conductors
- without supply cable
- lid fasteners for tool operation

rated peak withstand current resistance (lpk)	30 kA
centreline spacing of busbars	60 mm



# Mi 6458

# Busbar rated current: 400 A

- Busbar 5-pole, Dimensions busbars: L1-L3: 20 x 10 mm, N: 12 x 10 mm, PE: 12 x 5 mm
- distance between busbar supports to be equipped: 225 mm
- N conductor with the same current carrying capacity as the phase conductors
- without supply cable
- lid fasteners for tool operation

rated peak withstand current	30 kA
resistance (lpk)	
centreline spacing of busbars	60 mm





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# Mi 6459

# Busbar rated current: 630 A

- Busbar 5-pole, Dimensions busbars: L1-L3: 30 x 10 mm, N: 25 x 10 mm, PE: 12 x 10 mm
- distance between busbar supports to be equipped: 225 mm N conductor with the same current carrying capacity as the
- phase conductors without supply cable
- lid fasteners for tool operation

rated peak withstand current	45 kA
resistance (lpk)	
centreline spacing of busbars	60 mm

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# Mi 6452

# Busbar rated current: 250 A

- busbar 5-pole, dimensions busbars: L1-L3: 12 x 10 mm, N: 12 x 5 mm, PE: 12 x 5 mm
- distance between busbar supports to be equipped: 450 mm N conductor with the same current carrying capacity as the phase conductors
- without supply cable
- lid fasteners for tool operation

rated peak withstand current	30 kA
resistance (lpk)	
centreline spacing of busbars	60 mm

# Mi 6455

# **Busbar rated current: 400 A**

- Busbar 5-pole, Dimensions busbars: L1-L3: 20 x 10 mm, N: 12 x 10 mm, PE: 12 x 5 mm
- distance between busbar supports to be equipped: 450 mm
- N conductor with the same current carrying capacity as the phase conductors
- without supply cable
- lid fasteners for tool operation

rated peak withstand current resistance (lpk)	30 kA
centreline spacing of busbars	60 mm







# Mi 6456

# Busbar rated current: 630 A}

- Busbar 5-pole, Dimensions busbars: L1-L3: 30 x 10 mm, N: 25 x 10 mm, PE: 12 x 10 mm
- distance between busbar supports to be equipped: 450 mm N conductor with the same current carrying capacity as the
- phase conductors
- without supply cable lid fasteners for tool operation

rated peak withstand current resistance (lpk)	45 kA
centreline spacing of busbars	60 mm







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# Mi 6852

# Busbar rated current: 250 A

- busbar 5-pole, dimensions busbars: L1-L3: 12 x 10 mm, N: 12 x 5 mm, PE: 12 x 5 mm
- distance between busbar supports to be equipped: 450 mm N conductor with the same current carrying capacity as the
- phase conductors without supply cable
- cable entry only possible via flange
- lid fasteners for tool operation

rated peak withstand current resistance (lpk)	30 kA
centreline spacing of busbars	60 mm

# Mi 6855

# Busbar rated current: 400 A

- Busbar 5-pole, Dimensions busbars: L1-L3: 20 x 10 mm, N: 12 x 10 mm, PE: 12 x 5 mm
- distance between busbar supports to be equipped: 450 mm N conductor with the same current carrying capacity as the phase conductors
- without supply cable
- cable entry only possible via flange
- lid fasteners for tool operation

rated peak withstand current	30 kA
resistance (lpk)	
centreline spacing of busbars	60 mm

# Mi 6856

# Busbar rated current: 630 A

- Busbar 5-pole, Dimensions busbars: L1-L3: 30 x 10 mm, N: 25 x 10 mm, PE: 12 x 10 mm
- distance between busbar supports to be equipped: 450 mm N conductor with the same current carrying capacity as the
- phase conductors
- without supply cable
- cable entry only possible via flange
- lid fasteners for tool operation

rated peak withstand current	45 kA
resistance (lpk)	
centreline spacing of busbars	60 mm



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# Mi Distribution Boards Busbar Boxes prepared for Miniature Circuit-Breakers (MCB)



# Mi 6202

# Busbar rated current: 250 A

- busbar 5-pole, dimensions busbars: L1-L3: 12 x 10 mm, N: 12 x 5 mm, PE: 12 x 5 mm
- with busbar adapter for miniature circuit-breakers (MCB) up to 63 A rated current
- for mounting on DIN rail
- with 1 x PE terminal and 3 x N terminals 1.5 16 mm<sup>2</sup>
- N conductor with the same current carrying capacity as the phase conductors
- cut-out of 6 modules
- protection cover can be sealed
- with lockable blanking strips
- lid fasteners for hand operation

centreline spacing of busbars

# Mi 6204

# Busbar rated current: 400 A

- Busbar 5-pole,
   Dimensions busbars:
   L1-L3: 20 x 10 mm, N: 12 x 10 mm, PE: 12 x 5 mm
- with busbar adapter for miniature circuit-breakers (MCB) up to 63 A rated current
- for mounting on DIN rail
- with 1 x PE terminal and 3 x N terminals 1.5 16 mm<sup>2</sup>
- N conductor with the same current carrying capacity as the
- phase conductors
- cut-out of 6 modules
- protection cover can be sealed
   with lockable blanking strips
- with lockable blanking strips
- lid fasteners for hand operation

centreline spacing of busbars

60 mm

60 mm

# Mi 6206

#### Busbar rated current: 630 A

- Busbar 5-pole, Dimensions busbars: L1-L3: 30 x 10 mm, N: 25 x 10 mm, PE: 12 x 10 mm
- with busbar adapter for miniature circuit-breakers (MCB) up to 63 A rated current
- for mounting on DIN rail
- with 1 x PE terminal and 3 x N terminals 1.5 16 mm<sup>2</sup>
- N conductor with the same current carrying capacity as the phase conductors
- cut-out of 6 modules
- protection cover can be sealed
- with lockable blanking strips
- lid fasteners for hand operation

centreline spacing of busbars

60 mm



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# Mi Distribution Boards Busbar Boxes prepared for Miniature Circuit-Breakers (MCB)

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2 Wall 2

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# Mi 6203

# Busbar rated current: 250 A

- busbar 5-pole, dimensions busbars: L1-L3: 12 x 10 mm, N: 12 x 5 mm, PE: 12 x 5 mm
- with 2 adapters for miniature circuit breakers (MCB) up to 63 A rated current
- for mounting on DIN rail
- with 2 x PE terminals and 6 x N terminals 1.5 -16 mm<sup>2</sup>
- N conductor with the same current carrying capacity as the phase conductors
- cut-out 2 x 6 modules
- protection cover can be sealed
- with lockable blanking strips

lid fasteners for hand operation

centreline spacing of busbars

Mi 6205

# Busbar rated current: 400 A

- Busbar 5-pole,
   Dimensions busbars:
   L1-L3: 20 x 10 mm, N: 12 x 10 mm, PE: 12 x 5 mm
- with 2 adapters for miniature circuit breakers (MCB) up to 63 A rated current
- for mounting on DIN rail
- with 2 x PE terminals and 6 x N terminals 1.5 -16 mm<sup>2</sup>
- N conductor with the same current carrying capacity as the phase conductors
- cut-out 2 x 6 modules
- protection cover can be sealed
- with lockable blanking strips
- lid fasteners for hand operation

centreline spacing of busbars

60 mm

60 mm

# Mi 6207

# Busbar rated current: 630 A

- Busbar 5-pole, Dimensions busbars: L1-L3: 30 x 10 mm, N: 25 x 10 mm, PE: 12 x 10 mm
- with 2 adapters for miniature circuit breakers (MCB) up to 63 A rated current
- for mounting on DIN rail
- with 2 x PE terminals and 6 x N terminals 1.5 -16 mm<sup>2</sup>
- N conductor with the same current carrying capacity as the phase conductors
- cut-out 2 x 6 modules
- protection cover can be sealed
- with lockable blanking strips
- Iid fasteners for hand operation

centreline spacing of busbars

60 mm



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with built-in Switch Disconnectors in accordance with IEC 60 947-3

Mi 7103 63 A 3-pole PE + N • connection: 2,5-35 mm <sup>2</sup> , Cu or • with PE and N for copper condu • lid fasteners for tool operation • lockable handle	Mi VS 100 ictors	$\begin{array}{ c c c c c c c c c c c c c c c c c c c$
switching capacity maximum back-up fuse rated voltage	30 kW AC-23A/B 400 V 80 A Ue= AC 690 V	
Mi 7104 63 A 4-polig PE • connection: 2,5-35 mm <sup>2</sup> , Cu or • with PE terminals for copper cor • lid fasteners for tool operation • lockable handle	Mi VS 100 nductors	P = P = P = P = P = P = P = P = P = P =
switching capacity maximum back-up fuse rated voltage	30 kW AC-23A/B 400 V 80 A Ue= AC 690 V	
Mi 7213 100 A 3-pole PE + N connection: 10-35 mm <sup>2</sup> , Cu or N with PE and N for copper condu lid fasteners for tool operation lockable handle	Mi VS 100 uctors	$\begin{array}{ c c c c c c c c c c c c c c c c c c c$
switching capacity maximum back-up fuse rated voltage	45 kW AC-23A/B 400 V 100 A Ue= AC 690 V	<u>+</u> bd¶
Mi 7214 100 A 4-polig PE • connection: 10-35 mm <sup>2</sup> , Cu or N • with PE terminals for copper cor • lid fasteners for tool operation • lockable handle	Vli VS 100 nductors	$\begin{array}{ c c c c c c c c c c c c c c c c c c c$
switching capacity maximum back-up fuse rated voltage	45 kW AC-23A/B 400 V 100 A Ue= AC 690 V	



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**Mi Isolator Boxes** with built-in Switch Disconnectors in accordance with IEC 60 947-3



# Mi 7256

#### 160 A 3-pole PE + N

- connection: 6-70 mm<sup>2</sup>, Cu or Mi VS 160
  - (for terminal technology refer to index technical data)
  - with PE and N for copper conductors lid fasteners for tool operation
  - Iockable handle
  - switching capacity 80 kW AC-23A/B 400 V maximum back-up fuse 160 A rated voltage Ue= AC 500 V tightening torque for terminal 3.0 Nm terminal connection with saddle clamping unit 10.0 Nm screw connection M8



# Mi 7257

160 A 4-polig PE

- connection: 6-70 mm<sup>2</sup>, Cu or Mi VS 160
- (for terminal technology refer to index technical data) with PE terminals for copper conductors
- lid fasteners for tool operation
- lockable handle

switching capacity	80 kW AC-23A/B 400 V
maximum back-up fuse	160 A
rated voltage	Ue= AC 500 V
tightening torque for terminal	3.0 Nm terminal connection with saddle clamping unit
	10.0 INM SCREW CONNECTION IVI8



# Mi 7456

#### 160 A 3-pole PE + N

- connection: 6-70 mm<sup>2</sup>, Cu or Mi VS 160 (for terminal technology refer to index technical data)
- with PE and N for copper conductors
- lid fasteners for tool operation
- lockable handle

switching capacity	80 kW
	AC-23A/B 400 V
maximum back-up fuse	160 A
rated voltage	Ue= AC 500 V
tightening torque for terminal	<ul><li>3.0 Nm terminal connection with saddle clamping unit</li><li>10.0 Nm screw connection M8</li></ul>



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#### **Mi Isolator Boxes**

with built-in Switch Disconnectors in accordance with IEC 60 947-3





**Mi Isolator Boxes** 



# Mi 7445

#### 400 A 3-pole PE + N

- connection: M 10 (max. 1 x 240 mm<sup>2</sup> per phase) or VA 400 + Mi VS 400 (for terminal technology refer to index technical data)
- with PE and N for copper conductors
- lid fasteners for tool operation
- lockable handle

switching capacity	220 kW AC-23A/B 400 V
maximum back-up fuse	400 A
rated voltage	Ue= AC 500 V
tightening torque for terminal	20,0 Nm



# Mi 7846

# 400 A

4-polig PE

- connection: M 10 (max. 1 x 240 mm<sup>2</sup> je Phase) or VA 400 + Mi VS 400}
- with PE terminals for copper conductors
- cable entry only possible via flange
- lid fasteners for tool operation
- lockable handle

220 kW AC-23A/B 400 V
400 A
Ue= AC 500 V
20,0 Nm



# Mi 7865

#### 630 A 3-pole PE + N

- connection L1 L3: M 12 / VA 630 + Mi VS 630 connection PE + N: 1 x 120-300 / 2 x 95-185, Cu / Mi VS 630 (for terminal technology refer to index technical data) with removable jumper between PE and N
- cable entry only possible via flange
- lid fasteners for tool operation
- lockable handle

switching capacity	280 kW AC-23A/B 400 V
maximum back-up fuse	630 A
rated voltage	Ue= AC 500 V
tightening torque for terminal	40,0 Nm
rated current	480 A with incoming cable from the top 580 A with incoming cable from the bottom

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Mi Isolator Boxes

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# Mi 7866

# 630 A

# 4-polig PE

- connection L1 L3, N: M 12 / VA 630 + Mi VS 630, connection PE: M 10 / VA 400 + Mi Mi VS 400 (for terminal technology refer to index technical data)
- with PE terminals for copper conductors
- cable entry only possible via flange lid fasteners for tool operation
- lockable handle

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switching capacity	280 kW
	AU-23AVD 400 V
maximum back-up fuse	630 A
rated voltage	Ue= AC 500 V
tightening torque for terminal	40,0 Nm
rated current	480 A with incoming cable from the top
	580 A with incoming cable from the bottom

with built-in Switch Disconnectors in accordance with IEC 60 947-3

# **Mi DA 72**

# **Terminal Set for direct Connection to Equipment** max. 1 x 300 mm<sup>2</sup>, Cu/Alu, 3-pole

- terminal for copper and aluminium conductors
- set with 3 pieces
- rated connecting capacity:
  - 1 x 120-300 mm<sup>2</sup> s / f (round)
  - 1 x 120-300 mm<sup>2</sup> s (sector)
  - 1 x 120-185 mm<sup>2</sup> sol (sector)
  - 2 x 70-150 mm<sup>2</sup> s / f (round)
  - 2 x 95-150 mm<sup>2</sup> s (sektor)
  - 2 x 70 mm<sup>2</sup> sol (round)
  - 2 x 95-150 mm<sup>2</sup> sol (sector)
- Reference to the preparation of aluminum conductors:
  - 1. Clean the bared conductor end carefully by scraping off the oxide film, for example with a knife, (Please do not use rasps, emery paper or brushes!).
  - 2. Immediately after removing the oxide film the conductor end is to rub in with acid and alkali free fat for example vaseline, and immediately to be connected in the terminal.
  - 3. The prementioned processing steps are to be repeated, if the conductor was disconnected and connected again.
  - 4. Due to the disposition to flowing of aluminum the terminals are to be re-tightened before startup and after the first 200 operation hours.
- for the connection of switch disconnector 630 A (Mi 7865)
- width: 61 mm



# Changeover switch boxes(I-0-II) with built-in changeover switches in accordance with IEC 60 947-3



Network changeover switches (I-0-II) from Hensel reliably switch over to a stand-by power source Network changeover switches are required as per the VDE regulations and the Association of Network Operators (VDN). They help in switching and isolating electrical load circuits and are used for changing over to the stand-by power source manually in case of a power failure.

The parallel operation of networks is reliably prevented due to the 0 setting.

A short term parallel operation is impossible, therefore no synchronisation is required.

#### Functional circuit diagram for a stand-by power supply in the TN system



If a stand-by power source, such as, e.g., a generator is used as switchable power supply alternative to the public network, then it must have a network changeover switch according to the standard!



**EOVCASE** 



# Mi 7481

#### 160 A 4-polig PE

- connection: 6-70 mm<sup>2</sup>, Cu or Mi VS 160
- (for terminal technology refer to index technical data) with PE terminals for copper conductors
- Connection public power grid and substitute power supply from below, above consumer system, changeable
- kind of switch: I 0 II
- Iid fasteners for tool operation
- lockable handle

switching capacity	80 kW
maximum back-up fuse	160 A
rated voltage	Ue= AC 500 V
tightening torque for terminal	3.0 Nm terminal connection with saddle clamping unit
	10.0 Nm screw connection M8

# Mi 7882

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#### 250 A 4-polig PE

- connection: M 10 (max. 1 x 150 mm<sup>2</sup> per phase) or VA 400 + Mi VS 250 (for terminal technology refer to index technical data)
- with PE terminals for copper conductors
- Connection public power grid and substitute power supply from below, above consumer system, changeable
- kind of switch: I 0 II
- Iid fasteners for tool operation
- Iockable handle

switching capacity	132 kW			
maximum back-up fuse	250 A			
rated voltage	Ue= AC 500 V			
tightening torque for terminal	3.0 Nm terminal connection with saddle clamping unit			
	10.0 Nm screw connection M8			



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# **Mi Distribution Boards Mi MCCB Circuit-Breaker Boxes** with Circuit-Breaker in accordance with EN 60 947-2



<mark>Mi 7431</mark> 160 A 3-pole PE + N		IPPCRAL255PC703253
<ul> <li>connection: 70 mm<sup>2</sup>, Cu or Mi V</li> <li>with PE and N for copper condu</li> <li>MCCB with overload and short-</li> <li>lid fasteners for tool operation</li> <li>lockable handle</li> </ul>	/S 160 uctors circuit release	
rated voltage	AC 690 V	
rated ultimate short-circuit breaking capacity	lcs = lcu AC 690 V 8 kA lcs = lcu AC 415 V 36 kA	
overload release	setting range 112-160 A	
<mark>Mi 7432</mark> 250 A 3-pole PE + N		PC RAL 5 Wall 5 55 PC 7032 5 3
connection: 150 mm <sup>2</sup> , Cu or Mi	VS 250	<b> </b> ←262→  ←214→



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- with PE and N for copper conductors
- MCCB with overload and short-circuit release
- lid fasteners for tool operation
- Iockable handle

rated voltage	AC 690 V
rated ultimate short-circuit	lcs = lcu AC 690 V 8 kA
breaking capacity	lcs = lcu AC 415 V 36 kA
overload release	setting range 175-250 A

# Mi 7434

400 A 3-pole PE + N

- connection: M 10 / VA 400 + Mi VS 400 (for terminal technology) refer to index technical data)
- with PE and N for copper conductors
- MCCB with overload and short-circuit release
- lid fasteners for tool operation
- lockable handle

rated voltage	AC 690 V
rated ultimate short-circuit breaking capacity	lcs = lcu AC 690 V 10 kA lcs = lcu AC 415 V 36 kA
overload release	setting range 160-400 A

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# **Mi MCCB Circuit-Breaker Boxes** with Circuit-Breaker in accordance with EN 60 947-2



# Mi 7836

# 630 A

# 3-pole PE + N

- connection L1 L3: M 10 / VA 630 + Mi VS 630 connection PE + N: 1 x 120-300 / 2 x 95-185, Cu / Mi VS 630 (for terminal technology refer to index technical data)
- with removable jumper between PE and N
- MCCB with overload and short-circuit release cable entry only possible via flange
- lid fasteners for tool operation
- lockable handle

rated voltage	AC 690 V
rated ultimate short-circuit breaking capacity	lcs = lcu AC 690 V 10 kA lcs = lcu AC 415 V 45 kA
overload release	setting range 250-630 A
rated current	475 A with incoming cable from the top
	530 A with incoming cable from the bottom





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**ENVBOARD** 



# Mi Distribution Boards Empty Boxes with hinged, transparent Lid

2 Wall

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# Mi 9100

# Built-in dimensions W 125 x H 275 x D 150 mm

- max. installation depth with built-in mounting plate 146 mm, with built-in DIN rail 135 mm
- box size 1
- please order DIN rails, mounting plates or covers additionally
- 3 walls with metric knockouts for cable entry and assembly
- trilaterally combinable
- lid hinges attached
- with transparent, hinged lid
- lid fasteners for tool operation

# Mi 9200

# Built-in dimensions W 275 x H 275 x T 150 mm

- max. installation depth with built-in mounting plate 146 mm, with built-in DIN rail 135 mm
- box size 2
- please order DIN rails, mounting plates or covers additionally
- trilaterally combinable
- 3 walls with metric knockouts for cable entry and assembly
- lid hinges attached
- with transparent, hinged lid
- lid fasteners for tool operation

# Mi 9210

# Built-in dimensions W 275 x H 275 x D 195 mm

- max. installation depth with built-in mounting plate 191 mm, with built-in DIN rail 180 mm
- box size 2
- please order DIN rails, mounting plates or covers additionally trilaterally a such is a big to be added and the such as the
- trilaterally combinable
- 3 walls with metric knockouts for cable entry and assembly
- lid hinges attached
- with transparent, hinged lid
- lid fasteners for tool operation



# Mi 9300

#### Built-in dimensions W 275 x H 425 x D 150 mm

- max. installation depth with built-in mounting plate 146 mm, with built-in DIN rail 135 mm
- box size 3
- please order DIN rails, mounting plates or covers additionally
- trilaterally combinable
- 3 walls with metric knockouts for cable entry and assembly
- lid hinges attached
- with transparent, hinged lid
- lid fasteners for tool operation



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# Mi Distribution Boards Empty Boxes with hinged, transparent Lid





# Mi 9310

# Built-in dimensions W 275 x H 425 x D 195 mm

- max. installation depth with built-in mounting plate 191 mm, with built-in DIN rail 180 mm
- box size 3
- please order DIN rails, mounting plates or covers additionally
- trilaterally combinable
- 3 walls with metric knockouts for cable entry and assembly
- lid hinges attached
- with transparent, hinged lid
- lid fasteners for tool operation

# Mi 9400

#### Built-in dimensions W 275 x H 575 x D 150 mm

- max. installation depth with built-in mounting plate 146 mm, with built-in DIN rail 135 mm
- box size 4
- please order DIN rails, mounting plates or covers additionally
- trilaterally combinable
- 3 walls with metric knockouts for cable entry and assembly
- lid hinges attached
- with transparent, hinged lid
- lid fasteners for tool operation

# Mi 9410

#### Built-in dimensions W 275 x H 575 x D 195 mm

- max. installation depth with built-in mounting plate 191 mm, with built-in DIN rail 180 mm
- box size 4
- please order DIN rails, mounting plates or covers additionally
- trilaterally combinable
- 3 walls with metric knockouts for cable entry and assembly
- lid hinges attached
- with transparent, hinged lid
- lid fasteners for tool operation











# Mi Distribution Boards Empty Boxes with hinged, opaque Lid

2 Wall



# Mi 9101

# Built-in dimensions W 125 x H 275 x D 150 mm

- max. installation depth with built-in mounting plate 146 mm, with built-in DIN rail 135 mm
- box size 1
- please order DIN rails, mounting plates or covers additionally
- trilaterally combinable
- 3 walls with metric knockouts for cable entry and assembly
- lid hinges attached
- with opaque, hinged lid
- lid fasteners for tool operation

# Mi 9201

# Built-in dimensions W 275 x H 275 x T 150 mm

- max. installation depth with built-in mounting plate 146 mm, with built-in DIN rail 135 mm
- box size 2
- please order DIN rails, mounting plates or covers additionally
- trilaterally combinable
- 3 walls with metric knockouts for cable entry and assembly
- lid hinges attached
- with opaque, hinged lid
- lid fasteners for tool operation

# Mi 9211

#### Built-in dimensions W 275 x H 275 x D 195 mm

- max. installation depth with built-in mounting plate 191 mm, with built-in DIN rail 180 mm
- box size 2
- please order DIN rails, mounting plates or covers additionally
   trilaterally combinable
- 3 walls with metric knockouts for cable entry and assembly
- lid hinges attached
- with opaque, hinged lid
- lid fasteners for tool operation



# Mi 9301

#### Built-in dimensions W 275 x H 425 x D 150 mm

- max. installation depth with built-in mounting plate 146 mm, with built-in DIN rail 135 mm
- box size 3
- please order DIN rails, mounting plates or covers additionally
- trilaterally combinable
- 3 walls with metric knockouts for cable entry and assembly
- lid hinges attached
- with opaque, hinged lid
- lid fasteners for tool operation



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# Mi Distribution Boards Empty Boxes with hinged, opaque Lid



# Mi 9311

# Built-in dimensions W 275 x H 425 x D 195 mm

- max. installation depth with built-in mounting plate 191 mm, with built-in DIN rail 180 mm
- box size 3
- please order DIN rails, mounting plates or covers additionally
- trilaterally combinable
- 3 walls with metric knockouts for cable entry and assembly
- lid hinges attached
- with opaque, hinged lid
- lid fasteners for tool operation

# Mi 9401

# Built-in dimensions W 275 x H 575 x D 150 mm

- max. installation depth with built-in mounting plate 146 mm, with built-in DIN rail 135 mm
- box size 4
- please order DIN rails, mounting plates or covers additionally
- trilaterally combinable
- 3 walls with metric knockouts for cable entry and assembly
- lid hinges attached
- with opaque, hinged lid
- lid fasteners for tool operation

# Mi 9411

#### Built-in dimensions W 275 x H 575 x D 195 mm

- max. installation depth with built-in mounting plate 191 mm, with built-in DIN rail 180 mm
- box size 4
- please order DIN rails, mounting plates or covers additionally
- trilaterally combinable
- 3 walls with metric knockouts for cable entry and assembly
- lid hinges attached
- with opaque, hinged lid
- lid fasteners for tool operation













Connection Box	322	
Extension frames, DIN rails, Spacers	323 - 324	
Mounting plates, Fixing screws	325	
Covers, Busbars, Busbar supports	326 - 327	
Terminals for direct connection on busbars	328- 329	
Wiring strips	330	
Wiring terminals, Terminals for direct connection	331	
Auxiliary contact, Open-circuit shunt release, Undervoltage release Circuit-breaker terminal for direct connection	332 333	
Terminals	334 - 339	
HRC fuse switch disconnector,		
Wall gasket, Wall separator, Fixing spares	340 - 341	
Flanges, Ventilation flanges	342 - 345	
Canopy	345	
Conversion kits for lid fasteners	346	
Hinges for lids	347	
Hinged flap, protection covers for hinged flaps	348	
Components for wall mounting	349 - 350	





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# **Mi CB 10**

# **Connection Box**

- for the installation of devices that must be operated externally, such as plug devices, push buttons and switches
- for mounting to box walls 300 mm
- hinged mounting area
- with wall gasket



**UDISYO** 

#### Example:

The Connection Box allows a simple and fast installation of devices that must be operated externally.







# Mi ZR 4

#### **Extension frame** for enclosure size 4

- for extension of the installation depth by 85 mm
- degree of protection IP 65 is maintained with use of up to two extension frames
- inclusive fixing material



# MiZR 8

#### **Extension frame** for enclosure size 8

- for extension of the installation depth by 85 mm
- degree of protection IP 65 is maintained with use of up to two extension frames
- inclusive fixing material





# **Mi TS 15**

# **DIN** rail length 134 mm

- in accordance with DIN EN 60 715
- for Mi Empty box size 1
- for equipment or terminals with clip-on mounting
- with fixing screws

# **Mi TS 30**

#### **DIN** rail length 284 mm

- in accordance with DIN EN 60 715
- for Mi empty box sizes 1 to 8
- for equipment or terminals with clip-on mounting
- with fixing screws

# **Mi TS 45**

#### **DIN** rail length 434 mm

- in accordance with DIN EN 60 715
- for Mi empty box size 3
- for equipment or terminals with clip-on mounting
- with fixing screws

# **Mi TS 60**

#### **DIN** rail length 584 mm

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- in accordance with DIN EN 60 715
- for Mi empty box sizes 4 and 8
- for equipment or terminals with clip-on mounting
- with fixing screws



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# Mi DS 25

# Spacer

# height: 25 mm

- for spacing DIN-rails Mi TS ..
- 2 pieces
- with fixing screws for base of box and DIN rail

# Mi DS 50

#### Spacer height: 50 mm

- for spacing DIN-rails Mi TS ..
- 2 pieces
- with fixing screws for base of box and DIN rail



	Mi MP 1 Mounting plate W 259 x H 115 mm material thickness 4 mm for Mi-Empty boxes sizes 1, 2, 3, 4 with fixing screws	Lami- nated paper
	Mi MP 2 Mounting plate W 265 x H 265 mm a material thickness 4 mm for Mi-Empty boxes sizes 2 to 8 with fixing screws	Lami- nated paper
	Mi MP 3 Mounting plate W 265 x H 415 mm • material thickness 4 mm • for Mi-Empty boxes sizes 3, 4 • with fixing screws	Lami- nated paper
	<ul> <li>Mi MP 4</li> <li>Mounting plate W 265 x H 565 mm</li> <li>material thickness 4 mm</li> <li>for Mi-Empty boxes sizes 4, 8</li> <li>with fixing screws</li> </ul>	Lami- nated paper
1146	<ul> <li>Mi MP 8</li> <li>Mounting plate W 565 x H 565 mm</li> <li>material thickness 4 mm</li> <li>for Mi Empty box size 8</li> <li>with fixing screws</li> </ul>	Lami- nated paper





# **Fixing screw**

length 11 mm

- for assembling DIN rails or mounting plates at the base of the box
- for material thicknesses of 1 to 2.5 mm
- self-tapping
- galvanised

# **Mi BZ 13**

#### **Fixing screw** length 13 mm

- for assembling DIN rails or mounting plates at the base of the box
- for material thicknesses of 2.5 to 4 mm
- self-tapping
- galvanised



ENYMOD



I I S

1111

# **Mi EP 01**

# Cover

# for Mi Empty box size 1

- for retrofitting
- cover without cut-outs made of plastics, as protection cover or for the installation of devices
- with fastening material



# **Mi EP 02**

#### Cover

#### for Mi Empty box size 2

for retrofitting

**Mi EP 04** Cover

for retrofitting

cover without cut-outs made of plastics, as protection cover or for the installation of devices

cover without cut-outs made of plastics, as protection cover or

with fastening material

for Mi Empty box size 4

for the installation of devices with fastening material





# **Mi SS 22**

#### Busbar 12 x 5 mm

- length 2400 mm
- conductor material: Cu

# **Mi SS 25**

# Busbar 12 x 10 mm

- length 2400 mm
- conductor material: Cu
- busbar rated current 250 A as L1-L3, 400 A as N, 630 A as PE

# **Mi SS 40**

# Busbar 20 x 10 mm

- length 2400 mm
- conductor material: Cu
- busbar rated current 400 A as L1-L3

**EOVCASE** 

# 

busbar rated current 250 A as N/PE, 400 A as PE, with ENYSTAR as L1, L2, L3, N and PE 250 A



ENYMOD

# Mi SS 45

#### Busbar 25 x 10 mm

- length 2400 mm
- conductor material: Cu
- busbar rated current 630 A as N

# Mi SS 63

#### Busbar 30 x 10 mm

- length 2400 mm
- conductor material: Cu
- busbar rated current 630 A as L1-L3

# Mi ST 25

#### Busbar support for busbars 250 A, 5-pole

- centreline spacing of busbars: 60 mm
- for Installation in Mi empty boxes
- for busbars 12 x 10 mm (L1 L3)
- for busbars 12 x 5 mm, 250 A (N+PE)
- with fixing screws





20

# Mi ST 41

#### Busbar support for busbars 400 A, 5-pole

- centreline spacing of busbars: 60 mm
- for Installation in Mi empty boxes
- for busbars 20 x 10 mm (L1 L3)
- for busbars 12 x 10 mm (N)
- for busbars 12 x 5 mm (PE)
- with fixing screws



# **Mi ST 63**

#### Busbar support for busbars 630 A, 5-pole

- centreline spacing of busbars: 60 mm
- for Installation in Mi empty boxes
- for busbars 30 x 10 mm (L1 L3)
- for busbars 25 x 10 mm (N)
- for busbars 12 x 10 mm (PE)
- with fixing screws



N (PEN)

L1







# Mi Distribution Boards Accessories Terminals for direct Connection on Busbar

#### Terminal for direct connection on busbar

for solid (sol), stranded (s), flexible (f) copper conductors, with gas-tight crimped end sleeve and for laminated wiring strip

Note: To comply the insulation resistance there must be an air gab of 10 mm between different potentials and to inactive, conductive metal parts 15 mm.

	Туре	for Busbars	Width	Leiterquerschnitt	Wiring strip	Tightening torque
	KS 16 F	x 5 mm	11 mm	1,5-16 mm² Cu		4 Nm
<b>Š</b>	KS 16 Z	x 10 mm	11 mm	1,5-16 mm² Cu		4 Nm
	KS 35 F	x 5 mm	16 mm	4-35 mm <sup>2</sup> Cu	100 A: Mi VS 100 160 A: Mi VS 160	6 Nm
2	KS 35 Z	x 10 mm	16 mm	4-35 mm² Cu	100 A: Mi VS 100 160 A: Mi VS 160	6 Nm
	KS 70 F	x 5 mm	21 mm	10-70 mm² Cu	100 A: Mi VS 100 160 A: Mi VS 160	10 Nm
Ń	KS 70 Z	x 10 mm	21 mm	10-70 mm <sup>2</sup> Cu	100 A: Mi VS 100 160 A: Mi VS 160	10 Nm
	KS 120 F	x 5 mm	25 mm	25-120 mm² Cu	250 A: Mi VS 250 400 A: Mi VS 400	20 Nm
Ņ	KS 120 Z	x 10 mm	25 mm	25-120 mm² Cu	250 A: Mi VS 250 400 A: Mi VS 400	20 Nm
	KS 240/12	12 x 5 mm / 12 x 10 mm	34 mm	35-240 mm <sup>2</sup> Cu/Alu Prior to connection, alu must be prepared acco technical recommenda	iminium conductors ording to the relevant tions.	40 Nm
Ē	KS 150	12 x 5 mm / 12 x 10 mm	34 mm	35-150 mm² Cu	630 A: Mi VS 630	20 Nm
	KS 185	20 x 10 mm / 25 x 10 mm / 30 x 10 mm	38 mm	95-185 mm <sup>2</sup> Cu/Alu Prior to connection, alu must be prepared acco technical recommenda	iminium conductors ording to the relevant tions.	30 Nm
	KS 240 V	20 x 10 mm / 25 x 10 mm / 30 x 10 mm	38 mm		630 A: Mi VS 630	30 Nm
	KS 300	20 x 10 mm / 25 x 10 mm / 30 x 10 mm	38 mm	120-300 mm <sup>2</sup> Cu/Alu Prior to connection, alu must be prepared acco technical recommenda	iminium conductors ording to the relevant tions.	





1) Terminals included with supply of the boxes with electrical function, see description of the boxes.





# **Mi VS 100**

# Wiring strip

# Rated current: 100 A

- for connections of 100 A between busbars and built-in equipment
- wiring instructions for equipment (e.g. wire range ...mm<sup>2</sup>) must be observed
- length 2000 mm
- number of sheets: 3 pieces
- width: 9 mm
- material thickness per sheet 0.8 mm

# Mi VS 160

# Wiring strip

# Rated current: 160 A

- for connections of 160 A between busbars and built-in equipment
- wiring instructions for equipment (e.g. wire range ...mm<sup>2</sup>) must be observed
- length 2000 mm
- sheets: 6 pieces
- width: 9 mm
- material thickness per sheet 0.8 mm

# **Mi VS 250**

# Wiring strip

# Rated current: 250 A

- for connections of 250 A between busbars and built-in equipment
- wiring instructions for equipment (e.g. wire range ...mm<sup>2</sup>) must be observed
- length 2000 mm
- sheets: 6 pieces
- width: 15.5 mm
- material thickness per sheet 0.8 mm



# **Mi VS 400**

#### Wiring strip Rated current: 400 A

- for connections of 400 A between busbars and built-in equipment
- wiring instructions for equipment (e.g. wire range ...mm<sup>2</sup>) must be observed
- length 2000 mm
- sheets: 10 pieces
- width: 15.5 mm
- material thickness per sheet 0.8 mm

# Mi VS 630

# Wiring strip

# Rated current: 630 A

- for connections of 630 A between busbars and built-in equipment
- wiring instructions for equipment (e.g. wire range ...mm<sup>2</sup>) must be observed
- length 2000 mm
- number of sheets: 11 pieces
- width: 20 mm
- material thickness per sheet 1 mm







Wiring terminal up to 400 A

onto switchgear with flat contact M10

# terminal for direct connection of laminated copper wiring strip (Mi VS 250 and Mi VS 400)

# **VA 630**

**VA 400** 

up to 400 A

# Wiring terminal up to 630 A

tightening torque for terminal

- terminal for direct connection of laminated copper wiring strip (Mi VS 630) up to 630 A
- onto 630 A switchgears with M10 / M12

abtoning targue for tarminal	00.0 Nm
gritering torque for terminal	23,0 MIII



# **DA 240**

ti

#### Terminal for direct connection up to 400 A max. 240 mm<sup>2</sup>

- for mounting onto switchgear with flat contact M10
- with insulating cover
- rated connecting capacity: 35-70 mm<sup>2</sup> s (round), Cu/Alu 50-185 mm<sup>2</sup> s (sector). Cu/Alu 35-50 mm<sup>2</sup> sol, Cu/Alu 70-240 mm<sup>2</sup> sol (sector) Cu/Alu
- Reference to the preparation of aluminum conductors:
  - 1. Clean the bared conductor end carefully by scraping off the oxide film, for example with a knife, (Please do not use rasps, emery paper or brushes!).

8,0 Nm

- 2. Immediately after removing the oxide film the conductor end is to rub in with acid and alkali free fat for example vaseline, and immediately to be connected in the terminal.
- 3. The prementioned processing steps are to be repeated, if the conductor was disconnected and connected again.
- 4. The terminal is maintenance-free, that means a re-check of the torque is not required.

tightening torque for terminal

22,0 Nm

# **Mi DA 72**

#### Terminal set for direct connection to equipment max. 1 x 300 mm<sup>2</sup>, Cu/Alu, 3-pole

- terminal for copper and aluminium conductors
- set with 3 pieces
- rated connecting capacity:
  - 1 x 120-300 mm<sup>2</sup> s / f (round)
  - 1 x 120-300 mm<sup>2</sup> s (sector)
  - 1 x 120-185 mm<sup>2</sup> sol (sector)
  - 2 x 70-150 mm<sup>2</sup> s / f (round)
  - 2 x 95-150 mm<sup>2</sup> s (sektor)
  - 2 x 70 mm<sup>2</sup> sol (round)
  - 2 x 95-150 mm<sup>2</sup> sol (sector)
- Reference to the preparation of aluminum conductors:
  - 1. Clean the bared conductor end carefully by scraping off the oxide film, for example with a knife, (Please do not use rasps, emery paper or brushes!).
  - 2. Immediately after removing the oxide film the conductor end is to rub in with acid and alkali free fat for example vaseline, and immediately to be connected in the terminal.
  - 3. The prementioned processing steps are to be repeated, if the conductor was disconnected and connected again.
  - 4. Due to the disposition to flowing of aluminum the terminals are to be re-tightened before start-up and after the first 200 operation hours.
- for the connection of switch disconnector 630 A (Mi 7865)
- width: 61 mm









# Mi HS 20

Auxiliary contact 2 changeover contacts for retrofitting on switch disconnectors 160-630 A

- rated current: 6 A
- 2-pole
- connection with flat connector 6.3 mm

# MK 0107

# Auxiliary changeover contact for circuit-breakers 16-630 A

- rated current: 6 A
- 1-pole
- The auxiliary switches can report different functions depending on their mounting location in the circuit-breaker.
- circuit breaker 160/250 A = 2x ON/OFF signal + 1x tripping signal
- circuit-breaker 400/630 A = 3x ON/OFF signal + 1x tripping signal + 1x electric error signal

# MK 0106

# Open-circuit shunt release for circuit-breakers 16-630 A

- AC 50/60 Hz, 200 to 240 V
- the main contacts of the circuit-breaker are opened when voltage of more than 0.7 x Un is applied

# MK 0105

# Undervoltage release for circuit-breakers 16-630 A

- AC 50/60 Hz, 200 to 240 V
- when the control voltage drops below 0.35 0.7 x Un, the main contacts of the circuit-breaker are opened
- the closing of the contacts can only take place with voltages above 0.85 x Un





# **MK 0108**

# Circuit-breaker terminal for direct connection 1 x 35-300 mm<sup>2</sup>, Cu/Alu, 3polig

- for circuit-breakers 400 A and 630 A
- set with 3 pieces
- Reference to the preparation of aluminum conductors:
  - 1. Clean the bared conductor end carefully by scraping off the oxide film, for example with a knife, (Please do not use rasps, emery paper or brushes!).
  - 2. Immediately after removing the oxide film the conductor end is to rub in with acid and alkali free fat for example vaseline, and immediately to be connected in the terminal.
  - 3. The prementioned processing steps are to be repeated, if the conductor was disconnected and connected again.
  - 4. Due to the disposition to flowing of aluminum the terminals are to be retightened before start-up and after the first 200 operation hours.

# **MK 0109**

#### Circuit-breaker terminal for direct connection 2 x 70-240mm<sup>2</sup>, Cu/Alu, 3-pole

- for circuit-breakers 400 A and 630 A
- set with 3 pieces
- Reference to the preparation of aluminum conductors:
  - 1. Clean the bared conductor end carefully by scraping off the oxide film, for example with a knife, (Please do not use rasps, emery paper or brushes!).
  - 2. Immediately after removing the oxide film the conductor end is to rub in with acid and alkali free fat for example vaseline, and immediately to be connected in the terminal.
  - 3. The prementioned processing steps are to be repeated, if the conductor was disconnected and connected again.
  - 4. Due to the disposition to flowing of aluminum the terminals are to be retightened before start-up and after the first 200 operation hours.









# Mi VE 120

# Terminal for incoming/outgoing cables max. 16-150 mm<sup>2</sup>, Cu/Alu

- current carrying capacity: 250 A
- 4-pole
  - clamping units per pole: 2 x 16-150 mm<sup>2</sup>, 4 x 16-70 mm<sup>2</sup>
  - for terminal technology refer to index technical data
  - outgoing wiring strip Mi VS ..
  - Reference to the preparation of aluminum conductors:
    - 1. Clean the bared conductor end carefully by scraping off the oxide film, for example with a knife, (Please do not use rasps, emery paper or brushes!).
    - 2. Immediately after removing the oxide film the conductor end is to rub in with acid and alkali free fat for example vaseline, and immediately to be connected in the terminal.
    - 3. The prementioned processing steps are to be repeated, if the conductor was disconnected and connected again.
    - 4. Due to the disposition to flowing of aluminum the terminals are to be re-tightened before startup and after the first 200 operation hours.
  - tightening torque for terminal: 20.0 Nm
  - for the installation in Mi empty boxes sizes 2 to 8
  - pre-mounted on mounting plate 300 x 300 mm
  - with fixing screws

# Mi VE 125

# Terminal for incoming/outgoing cables max. 16-150 mm<sup>2</sup>, Cu/Alu

- current carrying capacity: 250 A
- 5-pole
- clamping units per pole: 2 x 16-150 mm<sup>2</sup>, 4 x 16-70 mm<sup>2</sup>
- for terminal technology refer to index technical data
- outgoing wiring strip Mi VS ..
- Reference to the preparation of aluminum conductors:
  - 1. Clean the bared conductor end carefully by scraping off the oxide film, for example with a knife, (Please do not use rasps, emery paper or brushes!).
  - 2. Immediately after removing the oxide film the conductor end is to rub in with acid and alkali free fat for example vaseline, and immediately to be connected in the terminal.
  - 3. The prementioned processing steps are to be repeated, if the conductor was disconnected and connected again.
  - 4. Due to the disposition to flowing of aluminum the terminals are to be re-tightened before startup and after the first 200 operation hours.
- for the installation in Mi empty boxes sizes 2 to 8
- pre-mounted on mounting plate 300 x 300 mm
- with fixing screws

# **Mi VE 240**

# Terminal for incoming/outgoing cables max. 25-240 mm<sup>2</sup>, Cu/Alu

- 4-pole
- current carrying capacity: 400 A
- incoming or outgoing cables per pole: 2 x 50-240 mm<sup>2</sup>, 4 x 25-120 mm<sup>2</sup>
- for terminal technology refer to index technical data
- outgoing wiring strip Mi VS ...
   Beference to the preparation
  - Reference to the preparation of aluminum conductors:1. Clean the bared conductor end carefully by scraping off the oxide film, for example with a knife, (Please do not use rasps, emery paper or brushes!).
  - 2. Immediately after removing the oxide film the conductor end is to rub in with acid and alkali free fat for example vaseline, and immediately to be connected in the terminal.
  - 3. The prementioned processing steps are to be repeated, if the conductor was disconnected and connected again.
  - 4. Due to the disposition to flowing of aluminum the terminals are to be re-tightened before startup and after the first 200 operation hours.
- tightening torque for terminal: 40.0 Nm
- for the installation in Mi empty boxes sizes 2 to 8
- pre-mounted on mounting plate 300 x 300 mm
- with fixing screws






#### Mi VE 245

#### Terminal for incoming/outgoing cables max. 25-240 mm<sup>2</sup>, Cu/Alu

- current carrying capacity: 400 A
- 5-pole
- incoming or outgoing cables per pole: 2 x 50-240 mm<sup>2</sup>, 4 x 25-120 mm<sup>2</sup>
  - for terminal technology refer to index technical data
- outgoing wiring strip Mi VS ..
- Reference to the preparation of aluminum conductors:
  - 1. Clean the bared conductor end carefully by scraping off the oxide film, for example with a knife, (Please do not use rasps, emery paper or brushes!).
  - 2. Immediately after removing the oxide film the conductor end is to rub in with acid and alkali free fat for example vaseline, and immediately to be connected in the terminal.
  - 3. The prementioned processing steps are to be repeated, if the conductor was disconnected and connected again.
  - 4. Due to the disposition to flowing of aluminum the terminals are to be re-tightened before startup and after the first 200 operation hours.
- tightening torque for terminal: 40.0 Nm
- for the installation in Mi empty boxes sizes 2 to 8
- pre-mounted on mounting plate 300 x 300 mm
- with fixing screws

#### **Mi VE 302**

#### Terminal for incoming/outgoing cables max. 95-300 mm<sup>2</sup>, Cu/Alu

- current carrying capacity: 630 A
- 2-pole
- incoming or outgoing cables per pole: 2 x 120-300 mm<sup>2</sup>, 4 x 95-185 mm<sup>2</sup>
- for terminal technology refer to index technical data
- outgoing wiring strip Mi VS 630
- Reference to the preparation of aluminum conductors:
  - 1. Clean the bared conductor end carefully by scraping off the oxide film, for example with a knife, (Please do not use rasps, emery paper or brushes!).
  - 2. Immediately after removing the oxide film the conductor end is to rub in with acid and alkali free fat for example vaseline, and immediately to be connected in the terminal.
  - 3. The prementioned processing steps are to be repeated, if the conductor was disconnected and connected again.
  - 4. Due to the disposition to flowing of aluminum the terminals are to be re-tightened before startup and after the first 200 operation hours.
- for the installation in Mi empty boxes sizes 2 to 8
- pre-mounted on mounting plate 300 x 300 mm
- with fixing screws

#### **Mi VE 303**

#### Terminal for incoming/outgoing cables max. 95-300 mm<sup>2</sup>, Cu/Alu

- current carrying capacity: 630 A
- 3-polig
- incoming or outgoing cables per pole: 2 x 120-300 mm<sup>2</sup>, 4 x 95-185 mm<sup>2</sup>
- for terminal technology refer to index technical data
- outgoing wiring strip Mi VS 630
  - Reference to the preparation of aluminum conductors:
  - 1. Clean the bared conductor end carefully by scraping off the oxide film, for example with a knife, (Please do not use rasps, emery paper or brushes!).
  - 2. Immediately after removing the oxide film the conductor end is to rub in with acid and alkali free fat for example vaseline, and immediately to be connected in the terminal.
  - 3. The prementioned processing steps are to be repeated, if the conductor was disconnected and connected again.
  - 4. Due to the disposition to flowing of aluminum the terminals are to be re-tightened before startup and after the first 200 operation hours.
- for the installation in Mi empty boxes sizes 2 to 8
- pre-mounted on mounting plate 300 x 300 mm
- with fixing screws







#### Mi VE 304

# Terminal for incoming/outgoing cables max. 95-300 mm<sup>2</sup>, Cu/Alu

- current carrying capacity: 630 A
- 4-pole
- incoming or outgoing cables per pole: 2 x 120-300 mm<sup>2</sup>, 4 x 95-185 mm<sup>2</sup>
- for terminal technology refer to index technical data
- outgoing wiring strip Mi VS 630
- conductor material:Cu/Alu
- Reference to the preparation of aluminum conductors:
  - 1. Clean the bared conductor end carefully by scraping off the oxide film, for example with a knife, (Please do not use rasps, emery paper or brushes!).
  - 2. Immediately after removing the oxide film the conductor end is to rub in with acid and alkali free fat for example vaseline, and immediately to be connected in the terminal.
  - 3. The prementioned processing steps are to be repeated, if the conductor was disconnected and connected again.
  - 4. Due to the disposition to flowing of aluminum the terminals are to be re-tightened before startup and after the first 200 operation hours.
- tightening torque for terminal: 50.0 Nm
- for the installation in Mi empty boxes sizes 2 to 8
- pre-mounted on mounting plate 300 x 300 mm
- with fixing screws

#### Mi NK 1

#### Connecting terminal Rated connecting capacity: 16-50 mm<sup>2</sup>, Cu

- current carrying capacity: 150 A
- 1-pole per 6 x 16 mm<sup>2</sup> s, 4 x 25 mm<sup>2</sup> s, 4 x 35 mm<sup>2</sup> s, 4 x 50 mm<sup>2</sup> s, 2 x 70 mm<sup>2</sup> s each
- for terminal technology refer to index technical data



#### Mi NK 2

#### Connecting terminal 1 x 70 mm<sup>2</sup>, 2 x 35 mm<sup>2</sup>, Cu

- current carrying capacity: 160 A
- for terminal technology refer to index technical data

#### Mi NK 3

#### **Connecting terminal**

4 x 35 mm², Cu

- current carrying capacity: 160 A
- for terminal technology refer to index technical data

#### Mi NK 4

#### Connecting terminal 2 x M 10

- current carrying capacity: 400 A
- for terminal technology refer to index technical data





#### **KKL 25**

#### Connecting terminal Rated connecting capacity: 6-35 mm<sup>2</sup>, Cu

- as a connecting terminal
- for installation on DIN rails in accordance with IEC 60 715, top hat profile 35 mm
- current carrying capacity: 102 A
   1 role Current carrying capacity: 10 rom2 and current carrying capacity.
- 1-pole 6 x 6 mm<sup>2</sup> sol, 6 x 10 mm<sup>2</sup> sol/ f\*, 4 x 16 mm<sup>2</sup> s/ f\*, 4 x 25 mm<sup>2</sup> s/ f\*, 2 x 35 mm<sup>2</sup> s/ f\* each f\* = with gas-tight end ferrule
- with two connected clamping units

rated insulation voltage	AC/DC 690 V
Dismantling length	16 mm
tightening torque for terminal	3,0 Nm



#### FC L 10

Terminal

#### 2 x 25 mm², 8 x 4 mm², Cu

- for installation on DIN rails in accordance with IEC 60 715, top hat profile 35 mm
- FIXCONNECT<sup>®</sup> plug-in technology, for terminal technology refer to index technical data
- current carrying capacity: 80 A

#### FC N 10





#### 2 x 25 mm², 8 x 4 mm², Cu

- for installation on DIN rails in accordance with IEC 60 715, top hat profile 35 mm
- FIXCONNECT<sup>®</sup> plug-in technology, for terminal technology refer to index technical data
- current carrying capacity: 80 A

#### **FC PE 10**



#### PE terminal

#### 2 x 25 mm<sup>2</sup>, 8 x 4 mm<sup>2</sup>, Cu

- for boxes with 1 x 12 modules (through terminal reduction to 9 modules)
- for installation on DIN rails in accordance with IEC 60 715, top hat profile 35 mm
- FIXCONNECT® plug-in technology,
- for terminal technology refer to index technical data
- current carrying capacity: 80 A

#### FC PN 10



#### PE and N terminal

#### per PE/N 1 x 25 mm<sup>2</sup>, 4 x 4 mm<sup>2</sup> Cu

- for installation on DIN rails in accordance with IEC 60 715, top hat profile 35 mm
- FIXCONNECT<sup>®</sup> plug-in terminal technology, for terminal technology refer to technical data
- current carrying capacity: 80 A

#### FC BS 5

# FIXCONNECT labelling system set with 5 pieces

- labelling system for FIXCONNECT plug-in terminals, not for terminals 2x25 / 4x4 mm<sup>2</sup>
- for attaching of labelling strips or marking with felt tip pen















#### FC PN 30

#### Forther to the total

#### PE and N terminal

#### per PE/N 3 x 25 mm<sup>2</sup>, 12 x 4 mm<sup>2</sup>, Cu

- 1-row
- FIXCONNECT® plug-in technology, for terminal technology refer to index technical data
- current carrying capacity: 80 A

PE+N x cross section	3 x 25 mm <sup>2</sup>
	12 x 4 mm <sup>2</sup>
	1-row
conductor material	Cu

#### **FC PN 60**

Entertor Borton Borton

#### PE and N terminal

#### per PE/N 6 x 25 mm<sup>2</sup>, 24 x 4 mm<sup>2</sup>, Cu

- 2-row
- FIXCONNECT<sup>®</sup> plug-in technology, for terminal technology refer to index technical data
- current carrying capacity: 80 A
- Not applicable in boxes Mi 1456, Mi 1455, Mi 1884 and Mi 1885

PE+N x cross section	6 x 25 mm <sup>2</sup>
	24 x 4 mm <sup>2</sup>
	2-row
conductor material	Cu

#### FC N 30

#### N terminal

#### per N 6 x 25 mm<sup>2</sup>, 24 x 4 mm<sup>2</sup>, Cu

- 1-row
- FIXCONNECT® plug-in technology, for terminal technology refer to index technical data
- current carrying capacity: 80 A

number x cross-section per N	6 x 25 mm² 24 x 4 mm² 1-row
conductor material	Cu

#### FC PE 30 PE terminal



per PE 6 x 25 mm<sup>2</sup>, 24 x 4 mm<sup>2</sup>, Cu

- 1-row
- FIXCONNECT® plug-in technology, for terminal technology refer to index technical data
- current carrying capacity: 80 A

number x cross-section per PE	6 x 25 mm <sup>2</sup> 24 x 4 mm <sup>2</sup>
	1-row
conductor material	Cu



#### Mi NK 14

#### **Connecting terminal**

per conductor 1 x 25 mm<sup>2</sup>, 12 x 16 mm<sup>2</sup>, Cu

- fixing on DIN rail
- for retrofitting in kits for DIN rail equipment
- for retrofitting in Mi Empty box





#### **KKL 34**

# Main line branch terminal per pole 4 x 1.5-25 mm<sup>2</sup> as L1-L3, Cu

- 3-pole as connecting terminal 25 mm<sup>2</sup>
- for installation on DIN rails in accordance with IEC 60 715, top hat profile 35 mm
- current carrying capacity: 80 A
- width: 61 mm

#### KKL 48

#### Main line branch terminal per pole 4 x 1.5-25 mm<sup>2</sup>, as L1-L3; 8 x 1.5-25 mm<sup>2</sup>, as N, Cu

- 4-pole as connecting terminal 25 mm<sup>2</sup>
- for installation on DIN rails in accordance with IEC 60 715, top hat profile 35 mm
- current carrying capacity: 80 A
- width: 100 mm

#### **KKL 5**4

#### Main line branch terminal per pole 4 x 1.5-25 mm<sup>2</sup> as L1-L3; 4 x 1.5-25mm<sup>2</sup> as N; 4 x 1.5-25 mm<sup>2</sup> as PE, Cu

- 5-pole as connecting terminal 25 mm<sup>2</sup>
- for installation on DIN rails in accordance with IEC 60 715, top hat profile 35 mm
- current carrying capacity: 80 A
- width: 100 mm







#### MN ST 00

#### HRC fuse switch disconnector

- 125 A
- 3-polig
- for mounting on mounting plate
- terminal connection 5-70 mm<sup>2</sup> Cu

rated voltage	AC 690 V
Weight	0,72 kg

#### **MS NH 00**

#### HRC bus-mounted fuse switch disconnector

- 125 A
- 3-polig
- height: 216 mm x width: 105 mm
- for retrofitting on busbars
- busbar thickness 10 mm and centreline spacing of busbars 60 mm
- terminal connection 5-70 mm<sup>2</sup> Cu

rated voltage	AC 690 V
Weight	1,197 kg

#### **NH SU 00**

#### HRC 00 bus-mounted fuse base

- 125 A
- 3-polig
- height: 216 mm x width: 105 mm
- for retrofitting on busbars
- for busbar thickness of 10 mm and centreline spacing of 60 mm
- terminal connection 5-70 mm<sup>2</sup> Cu

rated voltage

AC 690 V

#### Mi WD 2



#### Wall gasket for box walls 150/300 mm

- for the assembly of Mi boxes
- consisting of 1 seal, 4 wedge links, 1 bracket







#### Mi SV 25

# for busbars 250 A, 5-polewith wall gasket

**Busbar connector** 

- for the assembly of Mi boxes containing busbars
- tightening torque for terminal: 6.0 Nm
- Busbars 250 Å and 400 Å can only be connected with busbar connector Mi SV 25. Connecting of busbars with different rated current only under care and attention of the corresponding short circuit and overload standards.

#### Mi SV 45

#### Busbar connector for busbars 400/630 A, 5-pole

- with wall gasket
- for the assembly of Mi boxes containing busbars
- tightening torque for terminal: 10.0 Nm



9999

堂前 章前 章前 章前 章章

9999

#### Mi WT 1

#### Wall separator

 for subdivision of 300 mm box walls into 2 x 150 mm in case of flange or box assembly

#### Mi BE

#### Fixing spares 4 connectors

- for the assembly of Mi boxes
- when converting existing installations



#### **Mi Distribution Boards** Accessories

ENYMOD



#### **Mi FP 15**

Flange

#### without knockouts

- box wall 150 mm
- with fixing wedges and seal

mounting width	65 mm
mounting height	88 mm

#### **Mi FM 15**

#### Flange knockouts 3 x M 20, 1 x M 32/40/50

- box wall 150 mm
- with fixing wedges and seal

#### **Mi FP 20**

#### Flange without knockouts

- box wall 300 mm
- with fixing wedges and seal

mounting	width		
mountina	heiaht		

215 mm	
88 mm	



25



#### Flange

moi

knockouts 15 x M 16, 15 x M 20 box wall 300 mm with fixing wedges and seal

#### **Mi FM 25**

**Mi FM 20** 

#### Flange knockouts: 19 x M 16/25

- box wall 300 mm
- with fixing wedges and seal



#### **Mi FM 32**

#### Flange knockouts: 8 x M 25/32, 1 x M 25/32/40

- box wall 300 mm
- with fixing wedges and seal





#### **Mi FM 40**

Flange knockouts: 2 x M 25/32, 5 x M 32/40

box wall 300 mm with fixing wedges and seal



342



#### **Mi Distribution Boards** Accessories



#### **Mi FM 50**

Flange

knockouts: 2 x M 20, 4 x M 32/40/50

- box wall 300 mm
- with fixing wedges and seal

#### **Mi FM 60**

# Flange



- box wall 300 mm
- with fixing wedges and seal



#### **Mi FP 38** Flange

#### sealing range Ø 7-29 mm

- cable entry via integrated elastic membranes
- sealing range: 29 x Ø 7-12 mm, 4 x Ø 7-14 mm,
- 4 x Ø 11-20 mm, 1 x Ø 16-29 mm box wall 300 mm
- with fixing wedges and seal

#### **Mi FP 70**

Flange sealing range: 1 x Ø 30-72 mm

- box wall 300 mm
- with fixing wedges and seal



#### **Mi FP 72**

Flange sealing range: 2 x each Ø 30-72 mm

- box wall 300 mm
- with fixing wedges and seal



#### **Mi FM 63**

Flange with cable arrangement space knockouts: 3 x M 40/50/63

- box wall 300 mm
- with fixing wedges and seal





30

















#### **Mi FP 82**

#### **Cable insert**

#### sealing range: 2 x each Ø 30-72 mm

- box wall 300 mm
- divisible for cable insertion from the front
- degree of protection IP 54 only with additional strain and pressure relief (e.g. Mi ZE 62)



TPE

RAL

300 100

7035



#### **Stepped grommet** sealing range: Ø 30-72 mm

- for retrofitting of cable insertion Mi FP 82
- for indoor normal environment and (or) protected outdoor installation
- ambient temperature 25° to + 35° C

Material	thermoplastic
colour	RAL 7035



#### Cable strain relief for 2 cables with max. 60 mm external diameter

- with fixing rail 284 mm long
- to be used only in connection with cable insertion Mi FP 82

#### **Mi GS 30**

#### Box fin

#### for inserting cables across 2 boxes

- for box walls 300 mm
- removable
- can be retrofitted

#### **Mi BF 44**

#### Ventilation flange for vertical installation on box walls

- box wall 300 mm
- for ventilation of Mi-Distribution boards in the event of extremely high internal temperatures or a risk of water condensation





**BE 44** Ventilation insert



IP 44



#### BM 32

#### Pressure compensation element for M 32 knockouts

- for the reduction of condensation by pressure compensation in power distribution systems
- ISO thread M 32 x 1.5
- bore-hole: Ø 32.3 mm
- wall thickness of up to 8 mm
- with counter nut
- for indoor (normal environment and/or protected outdoor) and outdoor installation (harsh environment and/or outdoor)
   ambient temperature 25° to 1.5° C
- ambient temperature 25° to + 55° C
- In order not to exceed leakage limit of 0.07 bar with pressure compensation, one pressure compensation element BM 32 must be used per 42 litres (42000 cm<sup>3</sup>) of enclosure volume.
- Example: enclosure size 30 cm x 60 cm x 17 cm = 30600 cm<sup>3</sup> = 30,6 litres. Number of necessary BM 32 (M32) = 1 piece.



#### Mi DB 15

Canopy for box wall 150 mm

with fixing wedges and seal



#### Mi DB 30

Canopy for 300 mm box walls

with fixing wedges and seal



#### Mi DB 01

Canopy end plate

for canopies FP DB xx and Mi DB xx











<u>+</u> |+150+) |+−245→| <u>60</u> + 8





#### Mi PL 2

#### Sealing cap

2 sealing caps for converting the lid fasteners

#### Mi SR 4

Conversion set for manual operation on tool operation

4 fastening covers



**TTT** 

#### Mi SN 4

#### Conversion set for converting lid fasteners from tool to manual operation

4 manual actuators

#### Mi DV 01 Locking device insertion

only in connection with Mi PL 2, Mi SR 4 or Mi SN 4

#### Mi ZS 11

#### Lid lock with locking device I

- Is being used instead of fasteners for hand or tool operation in order to prevent unauthorised opening of the lids
- consisting of: cylinder lock, keys, locking device insertion, dust cover



#### Mi ZS 12

#### Lid lock with locking device II

- Is being used instead of fasteners for hand or tool operation in order to prevent unauthorised opening of the lids
- consisting of: cylinder lock, keys, locking device insertion, dust cover

#### **Mi DR 04**

# Lid fastener for tool operation triangle 8 mm

- is used instead of fasteners for hand- or tool operation, in order to make unauthorized opening of lids more difficult
- 4 locking devices with triangle 8 mm and key

#### DS 1

Triangular key 8 mm



# **ENV**CASE

#### Mi ZS 20

Mi hinge for lids



1199

#### for Mi boxes sizes 1, 2, 3, 4

- For operating installation device within a large area. The lid keeps permanently connected to the box.
- When assembling several boxes, the insertion can only be carried out for the external boxes.

#### Mi ZS 40

#### Mi hinge for lids for Mi boxes sizes 1 to 8

- For operating installation device within a large area. The lid keeps permanently connected to the box.
  - Wall connectors or flanges are necessary for assembly
- Not applicable in boxes with covers

#### Mi ZS 60

#### Mi hinge for lids for Mi boxes sizes 4 and 8 with extension frame

- For operating installation device within a large area. The lid keeps permanently connected to the box.
- Wall connectors or flanges are necessary for assembly
- Not applicable in boxes with covers

Example: Mi hinges for lids enable to operate installation device within a large area





#### **Mi Distribution Boards**

Accessories







#### **Hinged flap lock**

- for retrofitting in hinged flaps of 6 or 12 modules width
- for protecting the switchgear located behind the hinged flap against unauthorised access (only effective in connection with lid lock Mi ZS ..)
- consisting of:
- 1 lock, Mi KL
- 2 keys
- 1 grooved pin



IР 54



F

#### NZ KL 54

#### KWH meter window flap standard opening dimensions 140 x 310 mm

- in accordance with DIN 43 870
- for tool or manual operation
- can be locked with padlock (clip diameter max. 6 mm)
- complete with screws
- sealable
- degree of protection: IP 54

#### Mi SA 2

#### **Dust protection cover**

- for box sizes 1 to 4
- for 2 lid fittings

#### MT SP 01

#### Wallet for circuit diagram DIN A 5

self-adhesive

colour Material

clear-transparent thermoplastic halogen-free



#### Mi AL 40

#### 4 stainless steel external brackets

for external fixing of enclosures



#### Mi MS 2

#### Profile for wall mounting

- for Mi distribution board assemblies up to 900 x 1200 mm
- with 8 screws M6 x 16, washers and nuts for mounting enclosures

length	1950 mm
Material	sendzimir galvanised steel profile
	with structured powder coating



#### MX 0101

#### Mounting profile set U-profile for constructing a mounting frame

constisting of:
 1 x mounting rail, 2 x fixing brackets,
 1 x flat connector with connecting screws

length	1950 mm
Material	sheet steel, galvanised and
	powder-coated





RAL

62



#### **Mi Distribution Boards** Accessories

# **ENV**BOALD



7

#### MX 0112

#### Frame connector set for constructing a mounting frame

- fixing elements for T or L connections
- consisting of: 2 couplers with screws and nuts



Sheet steel



#### **MX 0105**

#### **Coupler set** for constructing a mounting frame

2 x couplers with connecting screws

Material

sheet steel, galvanised and powder-coated



RAL

7016

Sheet steel

#### **MX 0111**

#### Screw for box fixing

- set with 12 pieces
- M 6 x 16
- self-tapping for fixing the Mi box onto mounting profile MX 0101

#### Varnish pen RAL 7016

12 ml



#### **Z RK 19**

#### **Cable entry cover**

- height: 150 mm
- depth: 190 mm
- length 2000 mm

colour	RAL 7030
Material	thermoplastics
Weight	0 kg

#### **Z RKW 19**

#### Support for cable entry cover

- height: 150 mm
- depth: 190 mm

Material

#### thermoplastics



190

350



#### Mi Distribution Boards Technical Details



Operating and ambient conditions	352
Standards and regulations	353
Rated power dissipation of empty boxes	354 - 355
Dimensions in mm	356
Wall mounting	357
Mounting profile	358
Lid hinges, detail dimensions	359
Terminal technology	360
Design and project engineering	361
Assembly	362 - 366
·	



#### Mi Distribution Boards Technical Details Operating and Ambient Conditions

	Empty enclosures Mi 0 Mi 9	Circuit breaker boxes Mi 1			
Application area	Suitable for indoor installation and outdoor installation, protected against weather influences However, pay attention to the climatic effects on the installed equipment , for example, high or low ambient temperatures or formation of condensed water see technical information				
	Resistance to occasional cleaning procedures (direct jet) with high-pressure cleaner without cleaning additives, water pressure: max 100 bar, water temperature: Max. 80° C, distance => 0.15 m, in accordance with IP 69K requirements, single enclosure without lid equipment (no enclosure assembly), enclosure and cable glands at least IP 65.				
Ambient temperature - Average value over 24 hours - Maximum value - Minimum value	– + 70° C – 25° C	<ul> <li>+ 35° C The ambient temperature is reduced</li> <li>+ 40° C at distribution boares by the installed</li> <li>– 5° C equipment technology!</li> </ul>			
<b>Relative humidity</b> - short-time	- 50% at 40° C - 100% at 25° C				
Fire protection in the event of internal faults	Demands placed on electrical devices from standards and laws: Minimum requirements - Glow wire test in accordance with IEC 60 695-2-11: - 650° C for boxes and cable glands - 850° C for conducting components				
<b>Burning behaviour</b> - Glow wire test IEC 60 695-2-11 - UL Subject 94	960° C V-2 flame-retardant self-extinguishing	960° C V-2 flame-retardant self-extinguishing			
Degree of protection against mechanical load	IK 08 (5 Joule) IK 08 (5 Joule)				
Toxic behaviour	halogenfree 1)halogenfree 1)silicone-freesilicone-free				

<sup>1)</sup> "Halogen-free" in accordance with IEC 754-2 "Common test methods for cables - Determination of the amount of halogen acid gas".

For material properties see technical data.

**EOVSTA** 



#### Mi Distribution Boards Technical Data Standards and Regulations

Mi Distribution Boards comply with the require- ments of the IEC 61 439-2	Distribution boards assembled and wired according to manufacturer data without essential deviations from the original type or system.
	To meet these requirements for Hensel Mi Distribution Boards, the following must be noted:
	1. The distribution boards must consist of the verified enclosures documented in this list.
	2. The wiring of the equipment must be carried out with the cross-sections and con- ductor types indicated in Table "Rating of insulated conductors in switchgear assemblies", Index Tech- nics.
	3. Once the distribution board is completed, a routine test must be carried out in accordance with this standard.
	4. The test must be certified with a test report.
	<ul> <li>5. The assembly must be provided with a manufacturer's identification mark.</li> <li>Compliance with important data such as <ul> <li>limit of temperature rise</li> <li>dielectric strength</li> <li>IP degrees of protection</li> <li>creepage distances and clearances</li> <li>is verified for this system.</li> </ul> </li> </ul>
Standards and regulations	- IEC 61 439-2 Low-voltage switchgear and controlgear assemblies – Part 2: Power switchgear and controlgear assemblies
	<ul> <li>IEC 60 999, connecting devices</li> <li>Safety requirements for screw-type and screwless-type clamping units for electrical copper conductors</li> </ul>
	- DIN EN 50 262 Metric threaded cable glands for electrical installations
	- DIN 43 880 Built-in equipment for electrical installations; overall dimensions and related mounting dimensions
	- IEC 60 529 / DIN VDE 0470 Teil 1 Degrees of protection provided by enclosures (IP-Code)

ENYMOD



#### Mi Distribution Boards Technical Details Power Dissipation of Empty Boxes

Temperature rise ( $\Delta \vartheta$ ) with Mi-Distribution boards by power dissipation of electrical devices

#### Single enclosures





#### Mi Distribution Boards Technical Details Power Dissipation of Empty Boxes

#### Temperature rise ( $\Delta \vartheta$ ) with Mi-Distribution boards by power dissipation of electrical devices



#### Note!

#### The maximally permissible operating temperature inside the enclosures (J<sub>imax</sub>) is determined by:

- 1st Maximally permissible ambient temperature of the installed electrical devices (please consider data of the equipment manufacturers)
- 2<sup>nd</sup> Category temperature of the internal wiring and the inserted cables
- 3rd Temperatur resistance of the enclosure materials and the cable entries etc.

Example: Computation of the maximum rated power dissipation $(P_v)$			
Maximally permissible operating temperature inside the enclosure(s) $(9_{imax})$ :	e.g. 55° C		
Ambient temperature of the enclosure(s) $(9_{\cup})$ :	25° C		
Maximally permissible heating up inside the enclosure:	$\Delta \vartheta = \vartheta_{\text{tmax}} - \vartheta_{\text{U}} = 55^{\circ} \text{ C} - 25^{\circ} \text{ C} = 30 \text{ K}$		
Maximum permissible power dissipation of the installed equipment inclusive wiring (P_ $_{\!\rm V}$ ) in accordance with diagram:	Enclosure size 3 (540 x 270 x 163 mm)		
Single enclosure:	$P_v = 53 \text{ W}$		
Central enclosure:	$P_v = 45 \text{ W}$		
Extermal enclosure:	$P_v = 48 W$		

# Example: Computation of the operating temperature inside the enclosure (9)Ambient temperature of the enclosure(s) (9<sub>u</sub>): $25^{\circ}$ CRated power dissipation of the installed electrical equipment (P<sub>v</sub>):30 WHeating up inside the enclosures in accordance with diagram over: $\Delta9$ Enclosure size 3 (540 x 270 x 163 mm) single enclosure: $\Delta9 = 17$ K; $9_i = 9_u + \Delta9 = 25^{\circ}$ C + 17 K = 42° CEnclosure size 3 (540 x 270 x 163 mm) central enclosure: $\Delta9 = 20$ K; $9_i = 9_u + \Delta9 = 25^{\circ}$ C + 20 K = 45° CEnclosure size 3 (540 x 270 x 163 mm) external enclosure: $\Delta9 = 19$ K; $9_i = 9_u + \Delta9 = 25^{\circ}$ C + 19 K = 44° C



#### Mi Distribution Boards Technical Details Dimensions

#### ENYMOD

Dimensions of the interior installation depth with installed mounting plates.

The width of Mi Empty boxes Mi 9... enlarges about 15 mm because of the laterally mounted lid hinges, refer to product pages.

**ENYBOALD** 

**EOVCASE** 

= usable installation space





Mi 0100

Mi 0101

Mi 9100

Mi 9101

Mi 0400

Mi 0401 Mi 9400

Mi 9401















# Installation of equipment in protection plates:

Pre-drill the sections at the corners, then saw away the section from the protection plate by using a piercing saw at middle to low cutting speed.

Use coarse toothed saw blades for plastics (e.g. Bosch T 101 B).





#### **Mi Distribution Boards Technical Details** Wall Mounting

#### **External brackets** for external box fixing.

Dimensions

Mi AL 40 (4 fixing brackets)

for wall mounting in mm







Please fix mounting profile in vertical position as

length fix mounting profile for example with a

possible in order to give occation to cable routing behind the assembly. For cutting to the required



#### **Mounting profile**

for wall-mounted installation of Mi-Distribution boards, steel profile, 1950 mm long, dividable in the grid of 150 mm.

Mi MS 2

#### Transport

Regarding transportation its recommendable to protect the assembly against deflection. For that please screw the assembly to a solid timber.

#### **Mounting profiles**

U profiles for constructing a mounting frame.





Fixing matrix of mounting profile

clamp to a desk.

Note:



62,5mr

Mi ....

.5-81m







#### Mi Distribution Boards Technical Details Mounting Profile

Mounting profile

**EOVCASE** 

**ENVBOALD** 

**CASTAD** 





#### Mounting profile

To stabilize larger distributions boards for the transport and assembly on site.









ENYMOD



#### Mi Distribution Boards Technical Details Lid Hinges

When assembling several boxes, the insertion can only be carried out for the external boxes.

For operating installation device within a large area.

The lid keeps permanently connected to the box.



Usable in Mi boxes:

Back-stop of lids	Position of box: vertical left right top buttom				Position of box: horizontal left right top		bottom	
Size 1:	•	•	•	٠	٠	٠	•	٠
Size 2:	•	•	•	•	•	•	•	•
Size 3:	•	•	•	-	-	-	•	٠
Size 4:	•	•	•	-	-	-	•	•

#### Mi heavy-duty hinge joints Mi ZS 40

For operating installation device within a large area. The lid keeps permanently connected to the box. Wall connectors or flanges are necessary for assembly.

Not applicable in boxes with covers.

Lid is fastened with plastic screw to secure the total insulation .

#### Mi hinge for lids Mi ZS 60

For operating installation device within a large area.

The lid keeps permanently connected to the box.

Not applicable in boxes with covers.







**CUTSTAD** 





<u>ENYCASE</u>



#### Mi Distribution Boards Technical Details Terminals

#### ENYMOD

#### PE und N

FIXCONNECT®-Klemme

Rated connecting capacity
 of PE and N terminals
 Current carrying capacity:

Current carrying capacity: 80 A

Clamping unit	max. number	from - to max		max. number	from - to max.
Screw-type terminal	1 1 3 3 4 4	25 mm <sup>2</sup> , s 16 mm <sup>2</sup> , s 10 mm <sup>2</sup> , sol 6 mm <sup>2</sup> , sol 4 mm <sup>2</sup> , sol 2.5 mm <sup>2</sup> , sol 1.5 mm <sup>2</sup> , sol	Tested as connecting terminal for several conductors of the same cross-sections for using in one circuit	1 1 1 1 1 1 1	25 mm <sup>2</sup> , f 16 mm <sup>2</sup> , f 10 mm <sup>2</sup> , f 6 mm <sup>2</sup> , f 4 mm <sup>2</sup> , f 2.5 mm <sup>2</sup> , f 1.5 mm <sup>2</sup> , f
Plug-in terminal 4 mm <sup>2</sup>	1	1.5 - 4 mm², sol		1	1.5 - 4 mm <sup>2</sup> , f Without end ferrule; clamping unit has to be opened with a tool when conductor is inserted.

Corresponding cross-sections / copper

Terminal equipment and number of conductors to be connected	Number of modules	Mounted in Mi Circuit breaker boxes	PE terminal	up to 25 mm <sup>2</sup>
PE terminal	24 (2-row)	Mi 1224 Mi 1220 Mi 1222	<u>0000000000000000000000000000000000000</u>	2x25 mm <sup>2</sup>
	36 (3-row) 48 (4-row)	Mi 1336 Mi 1333 Mi 1448 Mi 1444	<u>0000000000000000000000000000000000000</u>	<u> </u>

#### N terminal

Number of modules	Mounted in Mi Circuit breaker boxes	N terminal	up to 25 mm <sup>2</sup>	니 plug-in jumper
24 (2-row)	Mi 1224 Mi 1220 Mi 1222	<u>രഹരംഹറഹ്റ്റും</u> 12x4 mm²	<u>)</u> 3x25 mm²	
36 (3-row) 48 (4-row)	Mi 1336 Mi 1333 Mi 1448 Mi 1444	<u>രറിരാരാറിര്റ്റുറ</u> 24x4 mm²	<u> കൊററ്റുററ്റുറ്ററ്റുറ</u> 6x25 mm²	



#### **Mi Distribution Boards Design and Project Engineering**

#### **Planning aids**

Planning and project engineering made easy with various planning tools

Project engineering with per-

software





With the EDP planning software HENPAS, the electrician can edit simple, fast and professional computer-assembly drawings and circuit diagrams. The parts libraries contain all elements which are required for the editing of assembly plans.

Project engineering with the catalogue

You can download the CAD Parts library of signs and symbols on the Internet at www.hensel-electric.de, download area.

#### Software requirements:

AutoSketch, AutoCAD or DXF compatible CAD programs.

Project engineering with the professional planning aid ENYGUIDE.

The configurator supports project engineering - online via Internet - or offline

www.enyguide.de ENYGUIDE





#### ENYGUIDE

is a professional planning aid for electricians for a simple and quick editing of design drawings and parts lists.

With the configuration software electricians can provide themself fast and easily layouts and parts lists without any time-consuming program installation at the computer.

The professional planning aid plots the distribution board as precise 3-dimensional image for final customers and/or the user or as 2-dimensional drawing or the assembler. The user can choose via several layers between the projection of assemblies, covers and doors. ENYGUIDE figures out independently the necessary accessories. The software particulary facilitates a reliable basis for calculations via automatically generated order and parts lists and guarantees a meaningful documentation for each project.



#### Step 1:

Assembly of Mi Distribution boards according to assembly draft

#### Step 2:

#### Knock out of box walls to provide electrical connection

Knock out the box walls to provide for the electrical connection inside the distributors. Knock out the appropriate openings of the wedge joints for the assembly of boxes.

#### Step 3:

#### Assembly of the boxes

A self-adhesive wall gasket is stuck to the box wall to seal the boxes in position (applies to closed box walls, too.)

The boxes are assembled by means of wedge connections. Screws M 6x15 may be used instead of wedges.

The wall clamp is pressed onto the box fins to increase the rigidity.

Wall separator for subdivision of 300 mm box walls into 2 x 150 mm for flange or box mounting.















2

**E**<u>O</u>VCASE

ENYMOD



#### Step 3:

Assembly of the boxes Cable entry via flanges.

Flanges are attached to the boxes by means of 4 wedge links and 1 clamp to the box wall.

Knock out for cable entries by means of a screwdriver.



Then the cable insertion is screwed on and the rubber entries are fitted.

The cable is inserted into the box from the front.















#### Step 3:

**ENV**CASE

**ENVBOALD** 

Assembly of the boxes

Subsequent installation of upper box fin.













Mounting canopy

for the unprotected installation

outdoors. Easy assembly by means of wedge connections.

**ENVSTAP** 



#### Step 4:

Installing equipment

Installation devices can be fastened on mounting plates with self-threading screws.



DIN rail fastening on spacers Mi DS 50





#### Step 5:

# Installation of equipment in cover plates

Pre-drill the sections at the corners. Then saw away the sections from the protection plate by using a piercing saw with coarse toothed saw blades for plastics (e.g. Bosch T 101 B).

**EOV**CASE

Screw the support for the protection plate Mi EP 02 at the base of the box.

Put on the protection plate.

Blanking strips (attached) for unused equipment openings in protection covers.

PE and N terminals for copper conductors (installed).

#### Dimension of 1 module

1 module = 18 mm



Dimensions in accordance withDIN 43 880 for DIN rail equipment











#### Notes to Mi Circuit breaker boxes

Spare equipment openings in protection covers are to be covered with the blanking strips to prevent accidental contact (blanking strips are enclosed for 50 % of equipment openings).

Circuit breaker boxes can be fitted with any DIN rail equipment, if per row (12 modules 12 x 18 mm) the assigned backup fuse won't exceed 80 A.

